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MONTHLY
LABOR REVIEW

SPECIAL FEATURES IN THIS ISSUE

Recent developments of subsistence-homesteads movement, p. 245

Average wage and salary payments in construction industry in Ohio, p. 253

Productivity, hours, and compensation of railroad labor, part 3, p. 269

Changes in cost of living in the United States, p. 476

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Hugh S. Hanna, editor

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This Issue in Brief

Up to the middle of January, Federal loans had been authorized for 11 subsistence-homestead communities which will provide for nearly 2,500 families, including over 10,000 persons. These are to be located in nine States and are to be mainly to demonstrate the possibilities of homestead life for occupational groups left stranded by the moving or closing of industries in which they formerly were employed, farmers marooned on land too poor to yield a living, etc. The homestead gardens will provide part of the families' maintenance, while part-time employment in local industries to be established is expected to supply the remainder and to provide the cash necessary to repay the loan. The loans to the individual projects range from $50,000 to $1,000,000 and are to be repaid within (usually) a 20-year term. Page 245.

Average earnings of building construction workers in Ohio were $982 in 1932, as compared with $1,668 in 1929, a decrease of 41.1 percent. During the same period the average number of wage earners employed in this industry decreased from 72,670 to 24,094, or 66.8 percent. These figures are computed from annual reports furnished the Ohio Department of Industrial Relations by all building contractors in Ohio employing three or more persons. Page 253.

The third of three articles on railroad labor discusses the groups directly connected with the handling of trains and engines and of traffic (p. 269). The principal technological changes affecting these groups include automatic devices for controlling train movements, highway crossing signals, grade separations, gravity yards for the classified distribution of cars, greater speed of trains, larger engines and cars, mechanized handling of freight and baggage, and improved terminal facilities. Because of these changes, a return even to the peak of revenue traffic would mean a large amount of unemployment on the basis of prevailing hours of labor.

Jobs involving a wide variety of occupations and skills were provided under the civil-works program inaugurated in November 1933. Wage rates were set for the various classes of work, with the announced policy of providing "regular work at regular wages." It was stipulated that half of the places should go to persons in receipt of relief, the other half being reserved for those who had somehow managed, up to this time, to remain self-supporting. The program, it was stated, was not to be regarded as a permanent policy, but as being undertaken to meet a national emergency. Page 312.

The larger foundries and machine shops had a net turn-over rate of 24.10 for the year 1932. The smaller firms, i.e., those with less than 100 employees, had a net turn-over rate of 42.32; that is, labor turn-over in the smaller firms was over 75 percent greater than for the larger firms in this industry. These and other data compiled from reports made to the Bureau of Labor Statistics by 373 firms in the foundry and machine shop industry for the years 1931 and 1932 are given in an article beginning on page 347.

The cost of living for wage earners' families increased 5.2 percent during the 6-month period ending December 1933, according to the semiannual survey made by the Bureau of Labor Statistics covering 32 cities. The cost of every group of items included in the cost-of-living budget, except rents, showed an increase during this 6-month period. The largest increase, 11.6 percent, occurred in the household-furnishing goods group. With the year 1913 as the base or 100, the cost of living index in December 1933 was 135.0, as compared with 128.3 in June 1933, and 132.1 in December 1932. Page 476.

The Supreme Court of the United States upheld the mortgage moratorium law enacted by the State of Minnesota in 1933. This was a very important decision as it involved the constitutionality of emergency legislation and may have an important influence upon future court decisions involving the various emergency laws enacted by Congress. Page 323.

The trends in employer-employee relations as they are developing under the collective-bargaining provision of the National Recovery Administration is the subject of a recent study by the National Industrial Conference Board. The study covered 3,314 companies employing approximately 2,586,000 workers. It was found that of the total number of employees in the establishments reporting, 45.7 percent dealt with employers individually, 45 percent dealt with employers through employee-representation committees, and 9.3 percent through organized labor unions. The data presented in the report relate to the early part of November 1933. Page 308.

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Recent Developments in Subsistence-Homesteads Movement[1]

A LONG-RANGE program under which groups of industrial workers and farmers are to be relieved of complete dependence upon either factory work or agriculture is being worked out by the Subsistence Homesteads Division of the United States Department of the Interior through a series of demonstration projects. One phase of the program is to assist in the redistribution of surplus populations, groups left stranded by the shutdown or permanent closing of the industries in which they earned their livelihood, and populations dependent on part-time work. A second phase includes the transfer of farmers marooned on eroded and worn-out lands to good land.

To do this it is forming new communities of garden homes which will afford a source of food supply as well as shelter. For the older worker who has small chance of industrial reestablishment such homesteads offer an opportunity to become self-sustaining. For the younger worker a garden home, acquired during his active years in industry, offers the prospect of a place of retirement when the period of maximum earning power has passed.

The shorter workday with the resultant increase in leisure hours, the increase of technological unemployment, cyclical unemployment, seasonality of employment, the move toward decentralization of industry, are all factors which it is believed make desirable some such movement as that toward subsistence gardening.

Federal Subsistence-Homesteads Policies

IN SETTING up the demonstration projects, "problem areas" are selected, on the basis of local need, suitability and value for demonstration purposes, and presence of various factors essential to the success of the plan.

The projects are to be, in general, of five major types:

(1) Workers' garden homesteads near small industrial centers in which small industries are located.

(2) Workers' garden homesteads near large industrial centers, usually of heavy industries not likely to decentralize.

(3) Projects for rehabilitation of "stranded" industrial population groups, particularly coal miners.

[1] This article is based upon information furnished by the Subsistence-Homesteads Division, U.S. Department of the Interior.

(4) Projects for reorganization of disorganized rural communities and for elimination of rural slums on lands submarginal for agriculture.
(5) Movement of farm population from submarginal reclamation projects.

Usually the homesteads will be established and administered in groups accommodating 25 to 100 families. The individual homestead will ordinarily consist of from 1 to 5 acres, "depending upon soil, size of family, character of agricultural operations contemplated, opportunity for wage employment. In rural reconstruction projects the size of the individual homestead will naturally be larger and agricultural operations somewhat more extensive in scope."

All operations will be carried on with loans from the $25,000,000 fund made available under the National Industrial Recovery Act. To handle the financial matters connected with the scheme, the Federal Subsistence-Homesteads Corporation has been organized, chartered under the laws of Delaware. It has capital stock of $10,000, held in trust for the United States by Secretary of the Interior Ickes, Assistant Secretary Chapman, and M. L. Wilson, director of the Subsistence-Homesteads Division, acting as trustees. For each homestead community a local nonprofit corporation will be set up, all of whose stock will be held by the Federal corporation, which also reserves the power to appoint the board of directors of the local corporation, to require uniform accounting systems, and to exercise such central control as may be found expedient.

The local corporation will select the land, choose the settlers, and carry on the operations incident to the construction of the various features of the settlement.

The Federal loans will be made to the local corporation, at 4 percent interest. The homesteader will pay at a slightly higher rate, in order to provide a reasonable margin for the cost of management. Loans for purchase of equipment, tools, and machinery, livestock, trees, fertilizer, etc., will be made where necessary and if unobtainable from other sources.

Progress Made Under Program

Up to the middle of January 1934 eleven subsistence-homesteads projects had been authorized. These were, in the order of approval, as follows:

(1) Arthurdale Community, Reedsville, W.Va. (about 200 families).[2]
(2) Community of Cooperative Production Units, Dayton, Ohio (35 families).[2]
(3) Subsistence-homsteads group at Decatur, Ind. (40–48 families).
(4) Subsistence-homsteads community at Valley Bend, W.Va. (about 125 families).

[2] For description of this community see Monthly Labor Review, December 1933, p. 1327.

(5) Subsistence-homesteads community in Monmouth County, near Hightstown, N.J. (about 200 families).
(6) Mahoning Homestead Gardens, to be established around 7 villages adjacent to Youngstown, Ohio (some 160 families).
(7) Penderlea Farms, in Pender County, N.C. (from 300 to 400 families).
(8) Chancellorsville Homsteads in Jasper and Purnam Counties, Ga. (about 500 families).
(9) Westmoreland Homesteads, Mount Pleasant township, Westmoreland County, Pa. (about 100 families).
(10) Birmingham Homesteads, Birmingham, Ala. (about 300 families).
(11) Wisconsin Forest-Farm Homesteads, in northern Wisconsin (about 400 families).

Altogether, loans of more than $5,000,000 have been approved for these 11 communities. In total nearly 2,500 families (over 10,000 persons) will be provided for. The statement following shows the amount of the loan authorized to the various projects:

Alabama: Birmingham Homesteads	$750, 000
Georgia: Chancellorsville Homesteads	1, 000, 000
Indiana: Decatur project	125, 000
New Jersey: Monmouth County project	500, 000
North Carolina: Penderlea Farms	1, 000, 000
Ohio:	
Cooperative Production Units, Dayton	50, 000
Mahoning Homestead Gardens, Youngstown	500, 000
Pennsylvania: Westmoreland Homesteads	276, 000
West Virginia:	
Arthurdale Community, Reedsville	[3]
Tygart River Valley Project, Valley Bend	250, 000
Wisconsin Forest-Farm Homesteads	750, 000

Types of Families Chosen

As ALREADY stated, the purpose of the program is to provide demonstration of the possibilities of homestead life for surplus populations, stranded agricultural and industrial population groups, and older workers for whom there is little or no opportunity of further industrial employment.

The projects thus far authorized include examples of all of these groups. Thus, the North Carolina and Wisconsin communities will be mainly for farmers who have been attempting to eke out an existence on isolated submarginal land; in Wisconsin these will come mainly from the farmers of cut-over forest land of poor quality. The Georgia colonists will be selected from persons who have recently moved into towns and cities, from graduates of agricultural schools who have never been able to get a start. and from cotton and corn farmers operating badly eroded land.

[3] Amount not yet definitely allocated.

Both of tne West Virginia communities will have as participants families of coal miners, sawmill workers, and farmers working land of low fertility along the mountain ridges. The Pennsylvania community will have as residents families left stranded by the abandonment of many coal mines in the district.

In New Jersey the homesteaders will be Jewish needle-trades workers from badly congested districts in New York City, with a few from Newark, Jersey City, and Philadelphia.

White-collar workers of the lower salaried classes will be given preference in the Youngstown, Ohio, and Birmingham, Ala., settlements. It is expected that among them will be factory workers, store clerks, garage mechanics, and members of the professional and semiprofessional classes. A cross section of many occupations is to be the aim in the Indiana and the Dayton, Ohio, colonies.

Many of these families are already on relief. Thus of the farmers in Randolph County, W.Va., it is stated that 35 percent have been receiving relief. Many of the coal miners there have had little or no work for 5 years, because of the shutdown of the mines due to exhaustion of the vein, reduced prices, or unprofitable operation as compared with mines in other areas. Of the workers from among whom the Decatur, Ind., homesteaders will be chosen, it is said that some are wholly unemployed, some are on part-time work, while a few have full-time jobs. The Subsistence Homesteads Division states that, where necessary, arrangements will be made for the continuation of relief until the homesteaders have had an opportunity to become self-supporting. Assurance will be required that relief responsibilities will not be shifted unfairly to rural areas.

In all cases, in selecting the participants in the project, preference will be given to those who have a background of farm or agricultural training and who are "temperamentally inclined towards gardening and home production of food."

Types of Communities Planned

THE experiments thus far started illustrate four of the five classes enumerated in the Federal program. Thus, the Decatur, Ind., project will be a homestead group near the small industrial center, Decatur being an industrial city of about 5,500 persons. The homestead development will be contiguous to the city and the homesteaders are intended to be part of the Decatur community rather than a group set apart. It is expected that they will continue to find part of their support through part-time employment in the city, the remainder being supplied from their home-garden plots.

The Birmingham and Youngstown projects will provide examples of workers' garden homesteads near large industrial centers. In

both of these cases the homesteads will not be in one group but will be situated on scattered tracts on the outskirts of various suburban towns of which they will become a part.

The New Jersey project will be a demonstration of decentralized industry adjacent to a great industrial center.

The Pennsylvania and West Virginia homesteads communities will provide for stranded occupational groups—coal miners in Pennsylvania and coal miners, sawmill workers, and farmers in West Virginia.

The projects in Georgia, North Carolina, and Wisconsin will be agricultural settlements.

Land policy.—In all cases the land selected for the homestead project will be of high quality, capable of intensive cultivation.

For the Valley Bend (W.Va.) homesteads, option has been obtained on some 2,250 acres of rich valley land about 10 miles from Elkins, the county seat. To the Youngstown group will be allotted plots on tracts of "proven productivity from farms now devoted to intensive commercial production." The New Jersey colony site will consist of 1,253 acres, representing 8 farms; the richest 200 acres will be used for the homesteads. With regard to the Georgia homestead program, the following statement was made:

> The project will be developed carefully as a coordinate part of a Federal and State planned land-use program. It is aimed to provide a demonstration of the possibilities of better land use and to show the way for improvements of the same type in comparable soil areas of the lower Piedmont, which extends from eastern Alabama across Georgia and South Carolina into North Carolina. This was formerly a prosperous plantation area devoted almost wholly to the commercial production of cotton. The cumulative effect of soil erosion, the boll weevil invasions, and the cutting away of the timber resources have resulted in the complete bankruptcy of the former social and economic system. The basis for the plan to be followed has for several years been studied in Georgia by various State agencies and Federal bureaus in the United States Department of Agriculture in cooperation with the University System. Basic facts made available by the study and aerial photo maps of 1,000 square miles, including the site for the homestead project, will serve as guides for effecting the materialization of sound land-use planning and rural reorganization in the lower Piedmont region. The rehabilitation of distressed families on subsistence homesteads and the determination of the best use for large areas of land unsuited for cotton or other farming purposes are the immediate focal points in that program.

The largest project thus far authorized, from the point of view of area included, is this Georgia program. Over 80,000 acres of high-quality plantation land have already been obtained on option, of which the best will be used for homestead purposes. That ill adapted for farming will be used for public and private forest and recreation districts.

The project in North Carolina will involve some 4,500 acres.

For tne Pennsylvania settlement option has been obtained on 1,800 acres of good farm lands. As these lands are now devoted to commercial production and as under the homestead plan production will be for use only, the result of the plan will be to reduce the total area for the production of cash crops in the county.

In the projects whose participants are selected from the farmers, it is planned that the lands now being worked by them shall be taken over and pass out of commercial production. Thus, in Wisconsin, the United States Forest Service will acquire the farms which the families will leave, together with other areas nearby, consolidating them into national forests. The net effect of the coordinated program will be to reduce sharply the land area in the region devoted to commercial farm production. Under a plan now being worked out, the farmer will be given credit for the land he now occupies on the basis of its value.

The individual homestead.—Each homesteader will have a plot of good land large enough to accommodate a small low-cost dwelling, with additional space for the raising of garden crops, poultry, and possibly a cow, pigs, etc. The homestead sites will be of varying size in the different projects. In the Arthurdale community all are of uniform size, 5 acres each. In the Indiana and New Jersey colonies plots will be an acre or more each, in Youngstown from 1½ to 3 acres. The agricultural communities will consist of homesteads of larger size; those in Georgia will be from 20 to 30 acres each.

The colonists will be given an opportunity to choose the location of their homes and the type of house design. The houses are to be of individual pattern, carefully designed, and are to have modern conveniences, including electrical equipment and running water.

Each occupant will be given a contract for the sale of his homestead. A down payment may or may not be required; the property will be purchased through small monthly or weekly payments, spread over a 20-year term. In the Monmouth County, N.J., colony a first payment of $500 will be required. The cost of the individual homesteads, including land, varies somewhat in the different projects, ranging from $2,000 to $3,000.

Community features.—In most of the projects these homestead units will be in a compact group forming a definite new community or colony, each with its own local government, schools, community center, and church, and with its own water supply, road system, etc. The New Jersey plans include a school with accommodations for 300 pupils and a community center.

In Pennsylvania, while the homesteads will be all in one tract, there are already school and church facilities in the immediate neighborhood, as well as railroads, street railways, and good roads.

In some instances space will be set aside for common pasture land. This is true of the two West Virginia projects, and in the Valley Bend colony there will also be a community wood lot. In the needle-trades settlement in New Jersey, it is planned to have a community cooperative farm which will have a dairy herd, a poultry department, and facilities for filling other food requirements of the colony. The farm will be worked by the colonists.

Sources of Employment for Homesteaders

IN ALL cases it is expected that part of the family's subsistence will be obtained from the crops, poultry, etc., raised on the homestead plot. All of these products will be for use only, and none will be sold. There will therefore be no increase in commercial farm products and no competition with local farmers producing for the market.

As funds will be necessary for the monthly payment on the homestead and for household furnishings and supplies not capable of being produced at home, part-time employment in some cash-producing job must be furnished. In Decatur, Birmingham, and Youngstown it is expected that this will be available in the city industries.

For the Valley Bend, W.Va., colonists opportunities of employment are expected to develop in connection with the Monongahela National Forest which is near the colony site. Negotiations are under way for the establishment by private concerns of several woodworking plants. Development of handicrafts will also be stimulated among the homesteaders, many of whom have considerable skill with tools. In Wisconsin, also, the families will have part-time work in Federal, State, and county forests.

In the North Carolina project, whose occupants will be farmers mainly, while the farm operations will supply the chief source of livelihood, it is expected that small industries, privately owned and financed, will also be developed, which will relieve the farmers of complete dependence on agriculture. In Georgia, private farm crop-processing plants and woodworking industries will be started which, together with industries in nearby cities, will provide additional sources of income.

In the needle-trades colony in New Jersey a clothing factory will be erected, financed by private funds, which will give part-time employment to the homesteaders. It will maintain contact with the New York market for its supply of unfinished goods and for the disposal of its finished product. In this factory the participants in the homestead project will follow their usual occupations. It is stated that this factory will be erected with a view to serving as "a model in design, in providing workers with satisfactory physical conditions, and will be organized so as to adapt itself to full cooperative ownership eventually."

Regarding the coal miners' project of Pennsylvania, it is stated that while opportunities for employment in that district are now scarce, a number of private industries are considering the opening of plants there which will give opportunities for cash income.

Some employment will, of course, be provided during the process of building up the new communities, as streets will have to be cut, water mains and electric cables laid, dwellings and other buildings constructed, etc. Thus, in Pender County, N. C., construction work was to get under way early in January 1934 and it was expected that this would provide an important new source of employment. It was planned that the families would be moved into the community in groups of 20.

In the Indiana, West Virginia, and Northern Wisconsin projects the Civil Works Administration will allocate labor to carry out preliminaries of the project, including planning, surveying, developing and preparation of the land for use. Some 1,700 workers are expected to be utilized on these three projects.

Among the participants in the Youngstown and Birmingham projects are expected to be a considerable number of building-trades workers who will be able to do work in the erection of their own homes.

Cooperating Agencies

WHERE possible the cooperation of local groups or organizations is being secured.

Thus, in Georgia the whole program is being carried out as a program of research, teaching, and extension under the University System of Georgia. All of the facilities of this system, consisting of 17 institutions including 2 agricultural experiment stations and 3 Negro institutions, will be at the service of the homestead group. The local authorities have assumed the responsibility of supplying roads, schools, and other public services, while an extensive program of adult education under university auspices is part of the program.

In Indiana, members of the faculty of Purdue University will be consulted as the project develops.

The unions in the needle trades are cooperating in the New Jersey community, as are also numerous Jewish social, industrial, labor, cooperative, and fraternal organizations. The New Jersey College of Agriculture will also be asked to assist.

In Wisconsin the project is being worked out jointly by the Subsistence Homesteads Division, the Federal Forest Service, the Wisconsin Conservation Department, the University of Wisconsin, and local units of government.

Some Results of the Homesteads Program

BOTH tangible and intangible results are expected from the subsistence-homesteads program. Thus, it is expected that these homestead communities will provide a new way of living for the families chosen, not only enabling them to become self-supporting but offering them the means of a fuller social life.

By the withdrawal of poor farm lands from cash production, the commercial farming area will be sharply reduced in the region, leaving under cultivation only the better lands capable of providing a higher plane of subsistence for the farm families.

With regard to the Wisconsin project it is stated:

> The project will apply to restricted land use districts in zoned counties. Purchase of the submarginal farms and their reservation for forest purposes will prevent a repetition of settlement, and remove the possibility that there will be repeated the economic tragedy which confronts many of the farmers now living on poor lands isolated from communities.
>
> Taxes on farm lands in the area will be reduced by the plan, due to the reduction of local governmental costs for schools, roads, and other public services, which have been particularly high because of the sparseness of settlement. A large area of submarginal land will be permanently eliminated from cultivation, while the project will provide the opportunity for settlers of greatly improving their economic and social conditions, opening the way for reducing the heavy relief load in the area. * * *
>
> One of the most important points in the program is that fire hazards to the forests due to scattered farming operations within them will be reduced, while the serious fire risks to the farmers now living in the midst of inflammable forests will be eliminated. This will be in line with the best conservation practice. The project will provide compact forest-farming communities adjacent to the publicly owned reservations.

Average Wage and Salary Payments to Wage Earners in the Construction Industry in Ohio, 1918 to 1932

By FRED C. CROXTON, COLUMBUS, OHIO, and FREDERICK E. CROXTON, COLUMBIA UNIVERSITY

THE average wage and salary payment in Ohio to wage earners in the construction industry, as computed from reports from practically all concerns or individuals employing 3 or more persons (with reports from some who employ fewer than 3), was $1,668 in 1929 and $982 in 1932—a decrease in the 3 years of $686, or 41.1 percent.

The total wage and salary payments to wage earners in the construction industry, as reported by employers, were $121,413,067 in 1929, and $23,657,092 in 1932—a decrease in the 3 years of $97,755,975, or 80.5 percent.

The average number of wage earners reported in the construction industry was 72,670 in 1929 and 24,094 in 1932—a decrease in the 3 years of 48,576, or 66.8 percent.

Source and Scope of Study

AN ARTICLE in the Monthly Labor Review for January 1934 presented a summarized analysis, by general industry groups, of average wage and salary payments in Ohio from 1918 to 1932. The source of the basic material and the scope of the study were discussed in that article and therefore need not be repeated in detail here. That summary dealt with the general industry groups—manufactures, wholesale and retail trade, service, transportation and public utilities, construction, agriculture, and fisheries. The present study relates wholly to the construction industry group and the several subgroups within that industry.

The reports, as required by law, made annually by employers to the Division of Labor Statistics of the Department of Industrial Relations of Ohio form the basis of this study. Reports were requested from all employers of 5 or more persons prior to 1924 and from employers of 3 or more from 1924 to 1932. Many small concerns in Ohio in the construction industry employ fewer than the minimum indicated. Some reports were received from employers of fewer than 3 (fewer than 5 prior to 1924) and all such returns are included in the compilations. The number of establishments varies from year to year, but the returns are from identical establishments throughout the 12 months of each year. Reports are not requested concerning governmental employment and interstate transportation.

The United States Bureau of the Census recently issued a report on the construction industry. The report states that "in 1930 the first census of the contracting group in the construction industry was inaugurated as part of the decennial census." The report further states that "all persons and establishments engaged in construction business of any kind, provided their gross business for the year amounted to at least $25,000, were required to furnish detailed reports." Reports were required for "all kinds of construction work, including the erection of buildings and installation of equipment essential to their proper operation, as well as engineering construction, such as highways, streets, water-power developments, railroads and car lines, bridges and tunnels, docks and piers, sewage disposal and drainage, airports, and all kinds of public works and utilities construction except that done on 'force account.'" "Force account" is defined as the term "used to indicate work by 'day labor' or labor employed directly by individuals, corporations, municipal, county, State, or Government authorities and not done under contract." Construction work on repairs and remodeling, as well as new work, is covered. The census report includes operative builders, general contractors, and subcontractors.

The census report, which is limited to concerns whose "gross business for the year (1929) amounted to at least $25,000", covers in

Ohio less than one-fifth as many establishments in the construction industry as reported for 1929 to the Ohio Division of Labor Statistics, which secured reports from practically every establishment employing 3 or more persons and from some employing fewer than 3. The average number of wage earners reported for Ohio in the census was 68 percent of the number reported to the Ohio division and the wage payments (to wage earners only) were 72 percent of the amount reported to the Ohio division.

The classification of contractors differs in the two reports, so that comparisons of lesser industry classifications are unsatisfactory. Generally, however, the average wage payments are higher in the census report than in the Ohio report with its very large proportion of small establishments. The average wage payment to wage earners in 1929 for the construction industry in Ohio, as computed from the 1,929 establishments included in the census report, was $1,786 and as computed from the reports from 10,183 establishments compiled by the Ohio Division of Labor Statistics it was $1,668. Comparisons of the two reports are shown in table 1.

TABLE 1.—COMPARISON OF COVERAGE OF UNITED STATES CENSUS REPORT ON THE CONSTRUCTION INDUSTRY IN OHIO AND OF REPORT (CONSTRUCTION INDUSTRY ONLY) OF THE OHIO DIVISION OF LABOR STATISTICS, 1929

Item	United States Census	Ohio Division of Labor Statistics
Establishments	1,929	10,183
Wage earners (average)	49,183	72,670
Wages paid (to wage earners)	$87,842,724	$121,413,067
Average wage payment (computed)	$1,786	$1,668

The census report on the construction industry presents a table (table XVI, p. 32) which shows, for the United States and for geographical areas, certain items based upon the computed average number employed. One of these items is "wages paid for construction labor per workman employed." The report states that "in making use of these figures the reader is cautioned that they should be considered to provide only a very general basis of comparison and should not be taken as an accurate measure of any given item." After explaining the method of computing the average number employed (dividing by 12 the sum of the number on the pay roll on the 15th of each month), the report states:

> It is recognized that this figure may not represent the actual average number employed throughout the year, because the actual number of men employed at other periods may have been greater or less than the number on the midmonth pay roll. Nevertheless, the average obtained by this method may be assumed, in most instances, to be a close approximation of the actual number. By divid-

ing total wages paid throughout the year by this derived average number employed, the approximate average annual amount paid each workman was obtained.

The method used in the present study in computing average number employed and average wage and salary payments is the same as that just described, and the same caution should therefore be observed in using the resultant figures. It should also be borne in mind that employers are not requested to give information as to how many employed on the 15th of each month are working full time and how many are on part time, so that some reported as employed may be working either a short week or a short day. Reports as to overtime work, also, are not requested.

Table 2 shows the number of wage earners employed in the construction industry on the 15th of each month of 1929 as reported by the 1,929 establishments included in the United States Census report and the 10,183 establishments reporting to the Ohio Division of Labor Statistics. The percent of variation from maximum to minimum employment in this industry is slightly less when the larger number of establishments is considered.

TABLE 2.—NUMBER OF WAGE EARNERS EMPLOYED IN THE CONSTRUCTION INDUSTRY IN OHIO ON THE 15TH OF EACH MONTH OF 1929, AS REPORTED BY THE UNITED STATES CENSUS AND THE OHIO DIVISION OF LABOR STATISTICS

Month	United States Census	Ohio Division of Labor Statistics	Month	United States Census	Ohio Division of Labor Statistics
January	29,991	46,346	November	53,268	75,806
February	31,737	46,779	December	41,759	61,363
March	34,990	54,814			
April	43,187	66,568	Maximum	63,382	91,734
May	49,598	76,626	Minimum	29,991	46,346
June	55,649	85,393	Variation from maximum:		
July	60,709	91,734	Number	33,391	45,388
August	63,150	91,275	Percent	52.7	49.5
September	63,382	87,478	Establishments reporting	1,929	10,183
October	62,773	87,857			

The Construction Industry as a Whole

Total Wage and Salary Payments

WAGE and salary payments in the construction industry, according to the reports received and compiled by the division of labor statistics, represented 5.8 percent of the total wage and salary payments paid in all industry groups enumerated in a preceding paragraph in the year 1918. This percentage rose in 1920 to 7.2, in 1927 to 8.0, and dropped in 1932 to 3.3. Payments to superintendents and managers are not included in these computations. The average number of employees in the construction group as compared to the total for the industry groups named was 5.9 percent in 1918, 6.4 percent in 1920, 7.1 percent in 1927, and 3.4 percent in 1932.

Table 3 shows total wage and salary payments reported paid in the construction industry each year from 1918 to 1932. Payments

are reported separately for each of four occupation groups—wage earners; bookkeepers, stenographers, and office clerks; salespeople (not traveling); and superintendents and managers. Payments and other data relating to superintendents and managers are not included in any other tables or in any of the computations in this study. Employers are instructed not to include in their reports salary payments to officials. Total wage and salary payments (omitting superintendents and managers) in the construction industry increased rapidly from 1918 to 1920, decreased 41.8 percent in 1921, increased slightly in 1922, and showed a very large increase in 1923. There was a recession in 1924, a gradual increase through 1927, a recession in 1928, a comparatively slight increase in 1929, and a very great decrease each year since that date. The total wage and salary payment in 1932 as compared with 1927 shows a decrease of $107,878,101, or 79.3 percent.

TABLE 3.—TOTAL WAGE AND SALARY PAYMENTS IN THE CONSTRUCTION INDUSTRY, 1918 TO 1932, BY GENERAL OCCUPATION GROUPS AND BY YEARS

Year	Establishments	Wage earners	Bookkeepers, stenographers, and office clerks	Salespeople (not traveling)	Total of preceding	Superintendents and managers	Grand total
1918	4,273	$62,646,726	$3,629,209	$566,429	$66,842,364	$4,288,305	$71,130,669
1919	4,747	75,722,325	4,063,456	1,061,366	80,847,147	4,001,698	84,848,845
1920	5,382	115,574,650	5,856,206	1,228,550	122,659,406	5,474,355	128,133,761
1921	4,890	65,528,871	4,761,255	1,080,441	71,370,567	4,949,853	76,320,420
1922	[1] 5,007	69,408,474	4,327,049	1,141,497	74,877,020	4,751,917	79,628,937
1923	5,883	126,632,946	5,512,351	1,318,568	133,463,865	5,936,960	139,400,825
1924	7,364	114,334,620	6,631,822	1,808,800	122,775,242	6,339,353	129,114,595
1925	8,407	119,786,318	6,767,973	2,047,099	128,601,390	6,553,458	135,154,848
1926	9,145	120,158,128	7,191,240	2,266,407	129,615,775	7,003,830	136,619,605
1927	9,724	126,076,960	7,712,554	2,332,337	136,121,851	7,334,053	143,455,904
1928	9,242	117,922,441	8,275,667	2,161,140	128,359,248	7,535,688	135,894,936
1929	10,183	121,413,067	8,160,166	2,196,454	131,769,687	7,823,916	139,593,603
1930	9,672	98,314,644	9,367,262	1,449,083	109,130,989	7,992,681	117,123,670
1931	8,272	54,519,506	5,833,638	1,313,937	61,667,081	5,695,227	67,362,308
1932	6,456	23,657,092	3,636,039	950,619	28,243,750	3,270,559	31,514,309

[1] The number of establishments reporting employees was 5,005; the number reporting wage and salary payments was 5,007.

Fluctuation in Employment

Not only does employment in the construction industry vary greatly from year to year, but the number employed within a year probably fluctuates more widely than in any other industry in Ohio employing large numbers of people, except possibly some special agricultural lines for which data are not available.

The fluctuation in employment within each year is shown in table 4. The numbers include both sexes employed as wage earners, bookkeepers, stenographers, and office clerks, and salespeople (not traveling). The smallest variation from maximum number of employees was 35.2 percent in 1921 and the greatest 54.2 percent in 1922. The fluctuation was more than 40 percent of the maximum for the year in 11 of the 15 years covered in this study.

TABLE 4.—FLUCTUATION IN EMPLOYMENT (BOTH SEXES) IN THE CONSTRUCTION INDUSTRY, 1918 TO 1932, BY YEARS AND MONTHS

[This table includes the 3 general occupation groups, wage earners; bookkeepers, stenographers, and office clerks; and salespeople (not traveling)]

Month	1918	1919	1920	1921	1922	1923	1924	1925
January	44,840	38,448	55,538	43,463	32,994	49,161	54,228	53,527
February	44,851	36,932	54,699	39,820	32,759	46,665	53,549	54,997
March	52,271	38,940	62,260	42,724	33,001	52,482	57,834	61,133
April	61,438	47,162	71,570	48,551	39,773	61,639	71,399	74,292
May	63,364	50,834	76,733	45,315	51,450	70,280	77,271	83,607
June	72,253	59,044	80,830	55,684	60,942	79,017	83,201	89,721
July	74,001	63,371	83,917	58,784	66,007	82,337	90,122	92,792
August	73,574	69,277	83,158	59,387	71,587	85,939	90,330	92,880
September	67,254	72,062	86,793	61,428	70,499	82,105	88,681	89,955
October	66,419	73,401	79,869	59,225	70,706	79,591	87,424	88,395
November	59,330	71,624	71,210	51,963	67,014	75,495	78,484	79,348
December	53,268	65,228	60,030	45,477	57,481	65,714	64,974	71,393
Maximum	74,001	73,401	86,793	61,428	71,585	85,939	90,330	92,880
Minimum	44,840	36,932	54,699	39,820	32,759	46,665	53,549	53,527
Variation from maximum:								
Number	29,161	36,469	32,094	21,608	38,828	39,274	36,781	39,353
Percent	39.4	49.7	37.0	35.2	54.2	45.7	40.7	42.4
Establishments reporting	4,273	4,747	5,382	4,890	5,005	5,883	7,364	8,407

Month	1926	1927	1928	1929	1930	1931	1932
January	54,655	59,160	54,363	51,965	55,338	37,870	22,315
February	54,738	61,230	53,034	52,461	55,174	37,526	22,659
March	56,558	67,340	59,484	60,592	60,103	39,670	22,329
April	69,200	77,775	70,937	72,427	72,037	47,429	26,478
May	81,978	88,101	82,070	82,554	81,203	52,179	29,316
June	93,101	96,463	87,411	91,432	82,239	54,402	30,984
July	96,273	100,442	91,919	97,838	84,511	54,885	31,057
August	97,455	102,812	97,550	97,432	81,937	53,657	31,915
September	98,970	101,680	94,819	93,615	77,639	51,469	32,693
October	93,992	94,716	94,230	93,976	72,797	47,671	31,949
November	87,287	83,566	85,216	81,904	62,290	39,388	27,641
December	74,933	69,140	70,169	67,374	50,021	31,060	20,891
Maximum	98,970	102,812	97,550	97,838	84,511	54,885	32,693
Minimum	54,655	59,160	53,034	51,965	50,021	31,060	20,891
Variation from maximum:							
Number	44,315	43,652	44,516	45,873	34,490	23,825	11,802
Percent	44.8	42.5	45.6	46.9	40.8	43.4	36.1
Establishments reporting	9,145	9,724	9,942	10,183	9,672	8,272	6,456

TABLE 5.—AVERAGE NUMBER OF PERSONS (BOTH SEXES) REPORTED EMPLOYED IN THE CONSTRUCTION INDUSTRY, BY GENERAL OCCUPATION GROUPS AND BY YEARS, 1918 TO 1932

Year	Establishments	Wage earners	Bookkeepers, stenographers, and office clerks	Salespeople (not traveling)	All employees
1918	4,273	57,276	3,381	415	61,072
1919	4,747	53,506	3,177	511	57,194
1920	5,382	67,871	3,717	629	72,217
1921	4,890	47,411	2,972	602	50,985
1922	5,005	50,981	2,913	624	54,518
1923	5,883	65,077	3,461	663	69,202
1924	7,364	69,838	4,030	923	74,791
1925	8,407	72,574	4,104	992	77,670
1926	9,145	74,600	4,244	1,084	79,928
1927	9,724	77,944	4,485	1,106	83,535
1928	9,942	72,633	4,727	1,073	78,434
1929	10,183	72,670	4,844	1,117	78,631
1930	9,672	63,625	5,323	660	69,607
1931	8,272	41,066	3,630	904	45,601
1932	6,456	24,094	2,691	734	27,519

The average number reported employed each year in each of the three general occupation groups and for all groups combined is shown in table 5. The numbers include both sexes. The highest average occurred in 1927 and the lowest in 1932 with a drop in the 5 years of 67.1 percent.

Average Wage and Salary Payments

Table 6 shows average wage and salary payments made to each of the three general occupation groups. These averages were computed by dividing the total wage and salary payments by the average number employed.

The highest average wage and salary payment was reported for wage earners in 1923, for bookkeepers, stenographers, and office clerks in 1930, and for salespeople (not traveling) in 1930. The lowest average payment was reported for wage earners and for salespeople (not traveling) in 1932, and for the clerical group in 1918.

Chart 1 shows in graphic form the average wage and salary payments to wage earners in the construction industry from 1918 to 1932.

TABLE 6.—AVERAGE WAGE AND SALARY PAYMENTS IN THE CONSTRUCTION INDUSTRY, BY GENERAL OCCUPATION GROUPS AND BY YEARS, 1918 TO 1932

Year	Wage earners	Bookkeepers, stenographers, and office clerks	Salespeople (not traveling)	All employees
1918	$1,094	$1,073	$1,365	$1,094
1919	1,415	1,279	2,077	1,414
1920	1,703	1,576	1,953	1,698
1921	1,382	1,602	1,795	1,400
1922	1,361	1,485	1,829	1,373
1923	1,946	1,593	1,989	1,929
1924	1,637	1,646	1,960	1,642
1925	1,651	1,649	2,064	1,656
1926	1,611	1,694	2,091	1,622
1927	1,618	1,720	2,109	1,630
1928	1,624	1,751	2,014	1,637
1929	1,668	1,685	1,966	1,676
1930	1,545	1,760	2,196	1,568
1931	1,328	1,607	1,453	1,352
1932	982	1,351	1,295	1,026

Wage Earners in Various Construction Industries

THIS study deals primarily with average wage and salary payments to wage earners in each of the various industries classified by the division of labor statistics as subdivisions of the construction-industry group. Wage earners formed more than 90 percent of the employees reported in the construction-industry group in each of the 15 years except 1932 which shows 87.6 percent.

The number of establishments in the construction industry reporting statistical data to the division of labor statistics is shown in table 7. The general construction-industry group is composed of 12 industries plus construction "not otherwise classified." As previously stated, reports were requested prior to 1924 from all employers

of 5 or more persons, and from 1924 to 1932 from all employers of 3 or more.

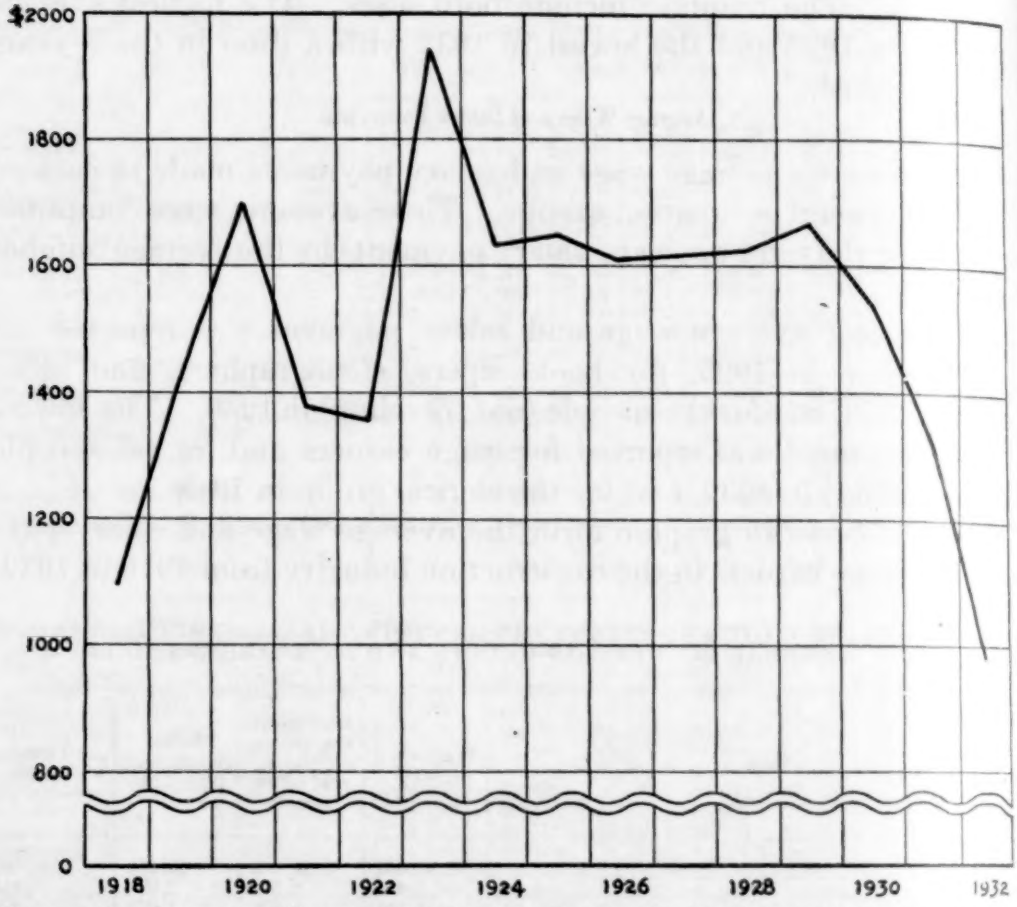

FIGURE 1.—AVERAGE WAGE AND SALARY PAYMENTS TO WAGE EARNERS IN THE CONSTRUCTION INDUSTRY, 1918 TO 1932

TABLE 7.—NUMBER OF ESTABLISHMENTS REPORTING EMPLOYEES AND TOTAL WAGE AND SALARY PAYMENTS, BY INDUSTRIES AND BY YEARS, 1918 TO 1932

Year	Brick, stone, and cement work	Electrical contracting	Erecting or installing machinery	General contracting, including wrecking	Oil, gas, and water, drilling or producing	Painting and decorating	Plastering, including lathing and stucco work	Plumbing and steam fitting	Sand and gravel excavating	Sheet-metal work and roofing	Street, road, and sewer contracting	Ventilating and heating	Construction, not otherwise classified	Total
1918	421	169	73	1,462	370	274	78	369	86	307	603	40	21	4,273
1919	441	186	85	[1] 1,808	436	287	131	[2] 394	73	306	556	29	15	4,747
1920	513	224	104	1,970	493	365	158	440	86	338	625	58	8	5,382
1921	480	202	86	1,731	485	311	131	373	72	294	663	58	4	4,890
1922	507	228	49	1,798	484	325	130	371	79	282	705	45	2	5,005
1923	558	219	80	2,185	521	490	150	416	91	306	795	70	2	5,883
1924	733	294	113	2,771	[1] 589	688	205	523	117	[2] 353	906	69	3	7,364
1925	775	331	152	3,180	651	804	273	649	124	403	965	85	15	8,407
1926	874	388	161	3,346	708	887	301	747	135	431	1,029	117	21	9,145
1927	950	428	164	3,554	708	932	318	832	148	441	1,093	121	35	9,724
1928	955	454	194	3,608	707	942	316	851	151	457	1,131	125	51	9,942
1929	1,005	456	239	3,538	739	990	329	842	155	515	1,161	141	73	10,183
1930	897	433	245	3,139	751	1,002	284	821	158	505	1,203	148	86	9,672
1931	795	402	180	2,566	670	860	254	742	146	473	973	157	54	8,272
1932	600	317	152	1,825	639	645	169	618	136	382	770	169	34	6,456

[1] 1 additional establishment reported total wage and salary payments.
[2] 1 of these establishments did not report total wage and salary payments.
[3] 2 additional establishments reported total wage and salary payments.

Some who employ fewer than the indicated minimum make annual reports to the division of labor statistics and such reports are included in the tabulations. Reports from all establishments employing fewer than three persons in this industry group would, of course, increase the number of employees and total wage and salary payments, but the effect on the figures of average wage and salary payments probably would not be great.

Total Wage and Salary Payments

Table 8 shows total wage and salary payments reported paid to wage earners in each of the 12 specified subdivisions of the construction industry group. The year of highest total wage and salary payments to wage earners during the period was 1920 for oil, gas, and water, drilling or producing; 1923 for general contracting, including wrecking; 1927 for brick, stone, and cement work, for plastering, including lathing and stucco work, for plumbing and steam fitting, and for street, road, and sewer contracting; 1929 for electrical contracting, for erecting and installing machinery, for sand and gravel excavating, for sheet-metal work and roofing, and for ventilating and heating. For painting and decorating, the figure for 1919 undoubtedly contains a clerical error. The amount of this error cannot be definitely determined as all original schedules and work sheets were destroyed some years ago. Ignoring 1919 leaves 1927 as the highest year for painting and decorating. Wage and salary payments for 1922 were not tabulated for individual industries by the division of labor statistics.

TABLE 8.—TOTAL WAGE AND SALARY PAYMENTS TO WAGE EARNERS IN THE CONSTRUCTION INDUSTRY, BY INDUSTRIES AND BY YEARS, 1918 TO 1932

Year	Brick, stone, and cement work	Electrical contracting	Erecting or installing machinery	General contracting, including wrecking	Oil, gas, and water, drilling or producing	Painting and decorating	Plastering, including lathing and stucco work
1918	$3,723,965	$2,344,269	$532,624	$29,369,737	$4,664,744	$1,760,571	$798,531
1919	4,020,501	2,747,551	543,918	35,932,286	4,826,955	[1] 8,130,348	1,033,799
1920	7,096,687	4,626,351	1,063,629	61,797,823	7,244,175	3,634,081	2,319,708
1921	4,796,198	2,746,188	678,033	27,324,324	5,133,372	2,435,930	1,677,335
1922	[2]	[2]	[2]	[2]	[2]	[2]	[2]
1923	8,273,515	4,567,314	821,039	70,788,995	6,124,838	4,711,684	2,586,648
1924	9,765,847	6,392,767	1,118,287	51,699,955	5,235,221	5,284,414	3,277,208
1925	10,616,263	5,022,878	1,337,015	52,803,369	5,426,241	6,095,479	3,488,827
1926	11,497,547	4,754,735	1,255,172	51,609,933	5,579,322	5,577,021	3,345,643
1927	11,498,602	5,877,669	1,550,966	52,516,510	4,933,887	6,618,215	3,526,698
1928	11,077,411	5,828,505	1,785,229	49,958,661	3,861,371	6,123,203	3,051,283
1929	9,321,964	8,327,784	1,908,439	49,728,610	4,528,510	6,233,150	3,087,133
1930	7,251,131	6,382,162	1,891,426	36,887,662	3,931,343	4,907,841	2,823,363
1931	4,415,377	4,033,332	1,417,566	19,064,336	2,509,033	2,875,719	1,587,566
1932	1,570,294	1,688,827	704,785	6,568,991	2,105,639	1,178,982	476,461

[1] Apparently a clerical error but original schedules and work sheets have been destroyed.
[2] Information not tabulated for individual industries.

TABLE 8.—TOTAL WAGE AND SALARY PAYMENTS TO WAGE EARNERS IN THE CONSTRUCTION INDUSTRY, BY INDUSTRIES AND BY YEARS, 1918 TO 1932—Contd.

Year	Plumbing and steam fitting	Sand and gravel excavating	Sheet-metal work and roofing	Street, road, and sewer contracting	Ventilating and heating	Construction, not otherwise classified	Total for construction industry
1918	$3,482,929	$1,334,719	$2,363,983	$11,579,826	$500,136	$190,692	$62,646,726
1919	4,311,783	991,477	2,676,208	10,018,758	360,399	128,342	75,722,325
1920	6,623,781	1,227,000	4,428,101	14,494,307	894,915	124,092	115,574,650
1921	4,634,266	720,220	2,623,078	12,011,516	710,721	37,690	65,528,871
1922	(1)	(1)	(1)	(1)	(1)	(1)	69,408,474
1923	6,487,897	1,235,285	4,000,132	16,075,879	933,209	26,511	126,632,946
1924	7,891,800	1,414,831	4,041,704	17,072,641	1,110,257	29,688	114,334,620
1925	9,226,283	1,461,270	4,589,575	18,226,804	1,358,086	134,228	119,786,318
1926	8,909,769	2,010,320	4,687,485	18,820,568	1,909,400	201,213	120,158,128
1927	9,786,114	2,014,581	4,855,797	20,740,877	1,842,197	314,847	126,076,960
1928	9,370,665	2,023,808	4,625,910	18,051,784	1,751,694	412,917	117,922,441
1929	8,985,868	2,135,412	5,040,264	19,047,804	2,427,562	640,567	121,413,067
1930	7,670,555	1,915,385	4,132,070	17,613,006	1,944,991	963,709	98,314,644
1931	4,386,120	1,179,212	2,564,741	8,596,268	1,424,202	466,034	54,519,305
1932	1,791,863	781,247	1,092,041	4,951,779	570,668	175,515	23,657,092

[1] Information not tabulated for individual industries.

Fluctuation in Employment

Probably no numerically important industrial group is subject to such violent fluctuations of employment as are wage earners in the construction industry. In addition to the wide variance of such employment from periods of expansion to periods of contraction and from year to year, there is a very great fluctuation within a year due to seasonal conditions, weather, and various other causes. Table 9 shows the fluctuations from month to month within each of the 15 years covered by this study. The variation from maximum was lowest (37.7 percent) in 1921 and highest (56.5 percent) in 1922. In 12 of the 15 years the variation exceeded 40 percent.

The average number of wage earners reported for each of the industries is shown in table 10 for 1918 to 1932. Employers report the number of wage earners employed on the 15th of each month and the average was computed by dividing the sum of the monthly figures in each instance by 12. Both males and females are included in this table. The reports from employers and the compilations of the division of labor statistics show the sexes separately as far as employees are concerned, but employers are not requested to show wage and salary payments separated according to sex of employees. In the whole construction industry group, however, the number of female wage earners reported is small. The average number of female wage earners for each of the 15 years 1918 to 1932, in order, was 130, 155, 165, 147, 117, 119, 130, 154, 298, 129, 146, 156, 120, 108, and 60, representing a maximum of four tenths of 1 percent in 1926.

TABLE 9.—FLUCTUATION IN EMPLOYMENT OF WAGE EARNERS IN THE CONSTRUCTION INDUSTRY, BY YEARS AND MONTHS, 1918 TO 1932

Month	1918	1919	1920	1921	1922	1923	1924	1925
January	41,298	35,160	51,516	39,711	29,792	45,315	49,488	48,676
February	41,316	33,652	50,566	36,134	29,537	42,792	48,719	50,129
March	48,757	35,617	58,029	39,025	29,758	48,568	52,975	56,207
April	57,848	43,734	67,186	44,881	36,454	57,651	66,470	69,275
May	59,641	47,305	72,277	41,685	48,003	66,158	72,322	78,533
June	68,249	55,406	76,351	52,082	57,375	74,796	78,169	84,554
July	69,860	59,609	79,415	55,219	62,356	78,067	85,084	87,522
August	69,506	65,411	78,687	55,864	67,852	81,684	85,301	87,606
September	63,288	68,093	82,340	57,956	66,746	77,895	83,601	84,699
October	62,515	69,418	75,469	55,797	66,940	75,305	82,327	83,187
November	55,509	67,541	66,894	48,524	63,232	71,214	73,535	74,208
December	49,524	61,121	55,726	42,055	53,723	61,483	60,069	66,292
Maximum	69,860	69,418	82,340	57,956	67,852	81,684	85,301	87,606
Minimum	41,298	33,652	50,566	36,134	29,537	42,792	48,719	48,676
Variation from maximum:								
Number	28,562	35,766	31,774	21,822	38,315	38,892	36,582	38,930
Percent	40.9	51.5	38.6	37.7	56.5	47.6	42.9	44.4
Establishments reporting	4,273	4,747	5,382	4,890	5,005	5,883	7,364	8,407

Month	1926	1927	1928	1929	1930	1931	1932
January	49,682	53,855	48,940	46,346	49,419	33,411	18,815
February	49,715	55,926	47,572	46,779	49,234	33,030	19,170
March	51,453	61,965	53,930	54,814	54,110	35,181	18,880
April	63,992	72,294	65,249	66,568	65,982	42,705	22,960
May	76,693	82,528	76,276	76,626	75,040	47,421	25,803
June	87,672	90,832	81,508	85,393	76,029	49,671	27,462
July	90,769	94,718	85,950	91,734	78,479	50,235	27,567
August	91,920	97,042	91,540	91,275	75,887	48,993	28,456
September	93,416	95,866	88,802	87,478	71,634	46,886	29,264
October	88,491	88,980	88,268	87,857	66,900	43,243	28,590
November	81,844	77,828	79,285	75,806	56,447	35,126	24,403
December	69,552	63,498	64,281	61,363	44,333	26,895	17,762
Maximum	93,416	97,042	91,540	91,734	78,479	50,235	29,264
Minimum	49,682	53,855	47,572	46,346	44,333	26,895	17,762
Variation from maximum:							
Number	43,734	43,187	43,968	45,388	34,146	23,340	11,502
Percent	46.8	44.5	48.0	49.5	43.5	46.5	39.3
Establishments reporting	9,145	9,724	9,942	10,183	9,672	8,272	6,456

TABLE 10.—AVERAGE NUMBER OF WAGE EARNERS REPORTED EMPLOYED IN THE CONSTRUCTION INDUSTRY, BY INDUSTRIES AND BY YEARS, 1918 TO 1932

Year	Brick, stone, and cement work	Electrical contracting	Erecting or installing machinery	General contracting, including wrecking	Oil, gas, and water, drilling or producing	Painting and decorating	Plastering, including lathing and stucco work	Plumbing and steam fitting	Sand and gravel excavating	Sheet-metal work and roofing	Street, road, and sewer contracting	Ventilating and heating	Construction, not otherwise classified	Total
1918	3,341	1,983	397	26,127	3,801	1,549	1,351	2,805	1,000	2,149	12,194	411	167	57,276
1919	3,238	2,007	338	26,437	3,893	1,753	668	3,116	820	2,062	8,815	274	85	53,506
1920	4,416	2,447	562	34,961	4,473	2,049	1,105	3,621	867	2,610	10,185	507	71	67,871
1921	3,378	1,661	379	19,373	3,527	1,544	898	2,797	594	1,874	10,950	417	21	47,411
1922	4,153	1,576	222	21,997	3,698	1,843	927	2,959	731	1,928	10,668	268	12	50,981
1923	5,229	2,668	424	26,984	5,002	2,610	1,175	3,778	903	2,420	13,187	677	16	65,077
1924	6,001	2,877	629	29,242	3,903	2,790	1,487	4,300	1,107	2,500	14,410	574	20	69,838
1925	6,602	2,671	648	28,345	4,525	3,275	1,830	4,783	1,138	2,747	14,741	674	93	72,574
1926	6,824	2,479	601	28,553	4,527	3,054	1,584	4,764	1,452	2,922	16,641	956	135	74,600
1927	7,039	3,145	752	30,768	3,916	3,520	1,705	5,205	1,470	2,896	16,452	889	187	77,944
1928	6,733	2,976	878	29,641	3,072	3,311	1,550	5,015	1,438	2,764	14,151	796	309	72,633
1929	5,935	3,080	983	28,796	3,646	3,415	1,629	4,828	1,499	3,041	14,184	1,180	457	72,670
1930	4,837	3,670	916	22,695	3,139	2,834	1,462	4,270	1,430	2,651	14,001	1,078	642	63,625
1931	3,380	2,372	742	13,866	2,349	1,895	972	2,885	1,066	1,771	8,509	909	353	41,066
1932	1,678	1,267	467	6,516	2,295	1,061	420	1,680	863	1,159	5,921	556	212	24,094

Average Wage and Salary Payments

The average wage and salary payments to wage earners are shown for each year from 1918 to 1932, except 1922, in table 11. These averages were computed for each year by dividing the total wage and salary payments to wage earners within each of the subdivisions as reported by employers to the division of labor statistics by the average number of wage earners employed as calculated from the employers' reports of the number employed on the 15th of each month.

Detailed tabulations for industries for 1922 were not made by the division of labor statistics and therefore only the average for the construction industry as a whole is shown. In five instances the individual averages have been omitted, as clerical errors have undoubtedly occurred and, since all original schedules and work sheets for those years have been destroyed, it is not possible to make corrections. These probable errors will affect only slightly the average for the entire construction industry.

Wage earners in the construction industries, particularly in the building trades, have an hourly rate which is comparatively high as compared with rates of pay in factories and some other lines of industrial work. They have, however, also been subject to greater irregularity in work than is the case in most if not all other industries. Fluctuation of employment was discussed briefly in connection with table 4 and table 9.

With all the information available from many sources concerning hourly rates of wages in the construction industries there has been very little made available concerning average wage and salary payments to such wage earners.

According to the reports made to the Ohio Division of Labor Statistics covering the 15-year period 1918 to 1932, the highest average wage and salary payment to wage earners in brick, stone, and cement work was $1,685 in 1926, and the lowest $936 in 1932, which represented a drop of $749, or 44.4 percent. The average payment to wage earners in electrical contracting was $1,959 in 1928, and $1,333 in 1932, which was a drop of $626, or 32 percent. In that industry, however, the average payment was lower in 1918 than in 1932. The average payment to wage earners in erecting or installing machinery fell from $2,088 in 1926 to $1,509 in 1932, which, though above the 1918 average, was a drop of $579, or 27.7 percent.

In general contracting, including wrecking, the average payment to wage earners fell from $1,831 in 1925 to $1,008 in 1932, a drop of $823, or 44.9 percent. In oil, gas, and water, drilling or producing, the average payment to wage earners was $1,620 in 1920 and $917 in 1932, a drop of $703, or 43.4 percent. In painting and decorating, the average payment to wage earners was $1,894 in 1924 and $1,111 in 1932, a drop of $783, or 41.3 percent.

The average payment to wage earners in plastering, including lathing and stucco work, was $2,204 in 1924 and $1,134 in 1932, a drop of $1,070, or 48.5 percent. The average payment to wage earners in plumbing and steam fitting was $1,929 in 1925 and $1,067 in 1932, a drop of $862, or 44.7 percent. The average payment to wage earners in sand and gravel excavating was $1,425 in 1929 and $905 in 1932, a drop of $520, or 36.5 percent.

In sheet-metal work and roofing the average payment to wage earners was $1,697 in 1920 and $942 in 1932, a drop of $755, or 44.5 percent. In street, road, and sewer contracting the average payment to wage earners was $1,427 in 1920 and $836 in 1932, a drop

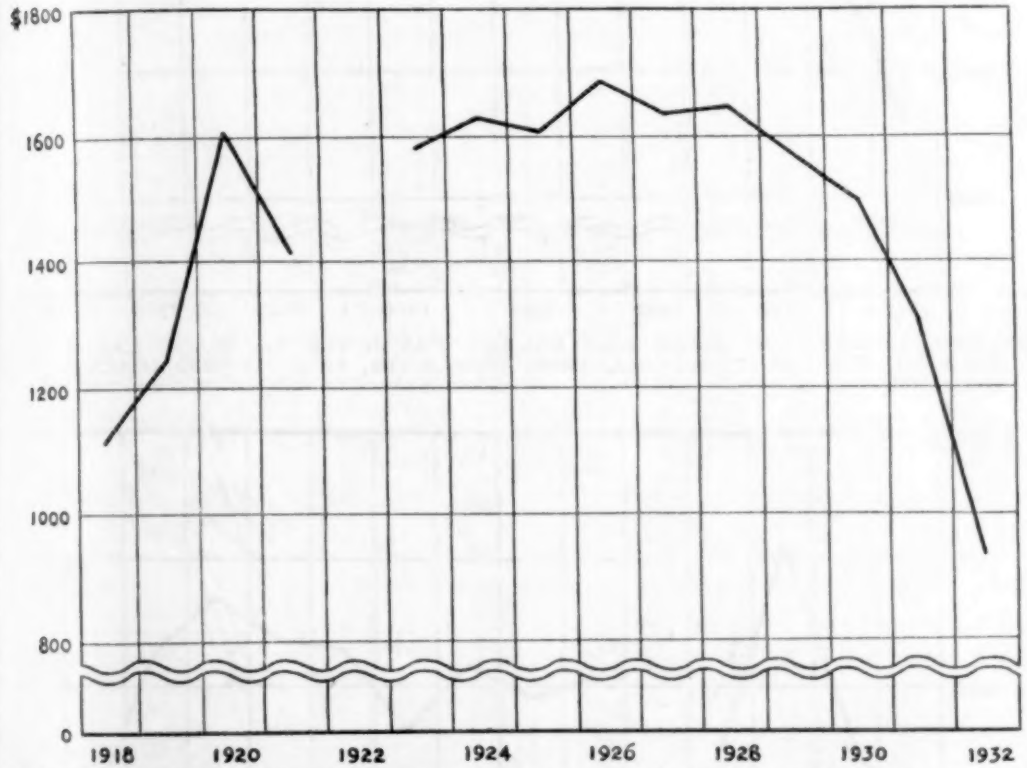

FIGURE 2.—AVERAGE WAGE AND SALARY PAYMENTS TO WAGE EARNERS IN BRICK, STONE, AND CEMENT WORK, 1918 TO 1932 (EXCEPT 1922)

of $591, or 41.4 percent. In ventilating and heating the average payment to wage earners was $2,201 in 1928 and $1,026 in 1932, a drop of $1,175, or 53.4 percent.

In considering the average wage and salary payments shown in table 11 it should be borne in mind that the average number of wage earners was used in computing the average wage and salary payments. The total number of wage earners who received wage and salary payments was, of course, in excess of the average number. The average number of wage earners was computed by adding the number reported employed on the 15th of each month of the year and dividing that sum by 12. As employers are not requested to give information as to how many employed on the 15th of each month are working full time and how many are on part time, some

reported as employed may be working either a short week or a short day. Reports as to overtime work, also, are not requested. The general occupation group "wage earners" includes skilled, semi-

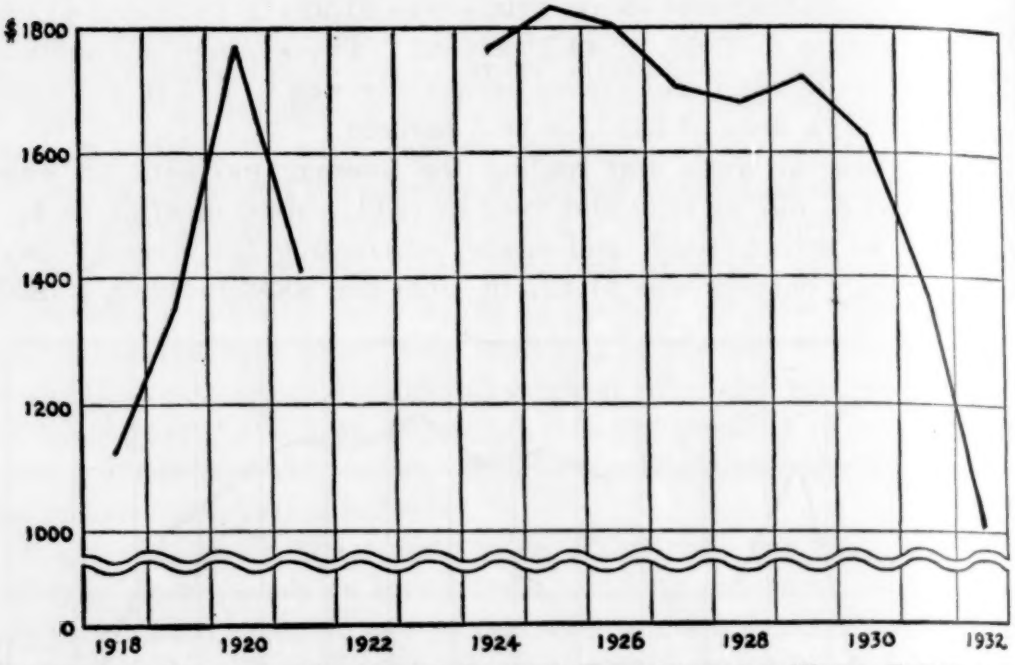

FIGURE 3.—AVERAGE WAGE AND SALARY PAYMENTS TO WAGE EARNERS IN GENERAL CONTRACTING, INCLUDING WRECKING, 1918 TO 1932 (EXCEPT 1922 AND 1923)

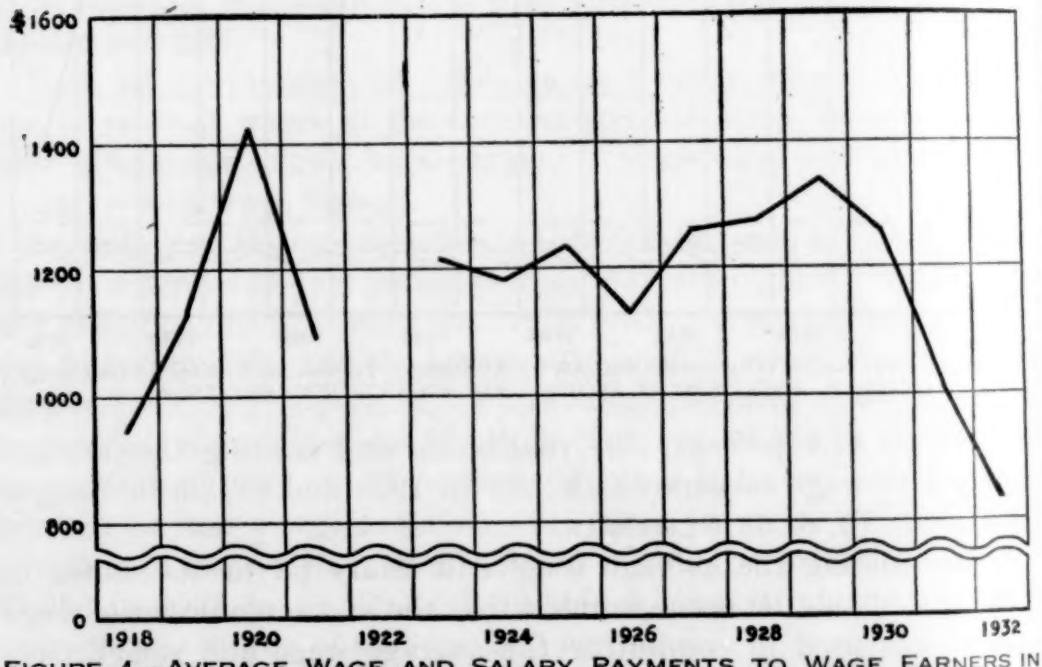

FIGURE 4.—AVERAGE WAGE AND SALARY PAYMENTS TO WAGE EARNERS IN STREET, ROAD, AND SEWER CONTRACTING, 1918 TO 1932 (EXCEPT 1922)

skilled, and unskilled workers. Both sexes also are included, but the number of female wage earners reported in the construction industry group did not exceed four tenths of 1 percent of the total wage earners in that group in any year during the 15-year period.

Charts 2, 3, and 4 show in graphic form the average wage and salary payments to wage earners in three industries—brick, stone, and cement work; general contracting, including wrecking; and street, road, and sewer contracting. The omission of 1922 from the three charts and of 1923 from one chart is explained in notes to table 11.

TABLE 11.—AVERAGE WAGE AND SALARY PAYMENTS TO WAGE EARNERS IN THE CONSTRUCTION INDUSTRY, 1918 TO 1932, BY INDUSTRIES AND BY YEARS

Year	Brick, stone, and cement work	Electrical contracting	Erecting or installing machinery	General contracting, including wrecking	Oil, gas, and water, drilling or producing	Painting and decorating	Plastering, including lathing and stucco work
1918	$1,115	$1,182	$1,342	$1,124	$1,227	$1,137	[1]
1919	1,242	1,369	1,609	1,359	1,240	[1]	$1,548
1920	1,607	1,891	1,893	1,768	1,620	1,774	2,099
1921	1,420	1,653	1,789	1,410	1,455	1,578	1,868
1922	[3]	[3]	[3]	[3]	[3]	[3]	[3]
1923	1,582	1,712	1,936	[1]	1,224	1,805	2,201
1924	1,627	[1]	1,778	1,768	1,341	1,894	2,204
1925	1,608	1,881	2,063	1,831	1,199	1,861	1,906
1926	1,685	1,918	2,088	1,801	1,232	1,826	2,112
1927	1,634	1,869	2,062	1,707	1,260	1,880	2,068
1928	1,645	1,959	2,033	1,685	1,257	1,849	1,969
1929	1,571	[1]	1,941	1,727	1,242	1,825	1,895
1930	1,499	1,739	2,065	1,625	1,252	1,732	1,931
1931	1,306	1,700	1,910	1,375	1,068	1,518	1,633
1932	936	1,333	1,509	1,008	917	1,111	1,134

Year	Plumbing and steam fitting	Sand and gravel excavating	Sheet-metal work and roofing	Street, road, and sewer contracting	Ventilating and heating	Construction, not otherwise classified	Total for construction industry
1918	$1,242	$1,335	$1,100	$950	$1,217	[2]	$1,094
1919	1,384	1,209	1,298	1,137	1,315	[2]	1,415
1920	1,829	1,415	1,697	1,427	1,765	[2]	1,703
1921	1,657	1,212	1,400	1,097	1,704	[2]	1,382
1922	[3]	[3]	[3]	[3]	[3]	[2]	1,361
1923	1,717	1,368	1,653	1,219	1,378	[2]	1,946
1924	1,835	1,278	1,617	1,185	1,934	[2]	1,637
1925	1,929	1,284	1,671	1,236	2,015	[2]	1,651
1926	1,870	1,384	1,604	1,131	1,997	[2]	1,611
1927	1,880	1,370	1,677	1,261	2,072	[2]	1,618
1928	1,869	1,407	1,674	1,276	2,201	$1,336	1,624
1929	1,861	1,425	1,657	1,343	2,057	1,402	1,668
1930	1,796	1,339	1,559	1,258	1,804	1,501	1,545
1931	1,520	1,106	1,448	1,010	1,567	1,320	1,328
1932	1,067	905	942	836	1,026	828	982

[1] Apparently a clerical error was made in reporting or in tabulating number of employees or total wage and salary payments, but not possible to determine definite correction.
[2] Not computed owing to small number involved.
[3] Information concerning total wage and salary payments not tabulated for individual industries.

Conclusion

THE average number of wage earners employed, as reported by practically all concerns and individuals employing 3 or more persons (with reports from some employing fewer than 3) decreased between 1929 and 1932 more than 70 percent in 3 of the 11 individual industries listed under construction. Electrical contracting has not been included in the comparisons in this and succeeding paragraphs for reasons noted in table 11. The decrease was more than 50 percent in 9 of the 11 industries.

The total wage and salary payments to wage earners, as reported by employers, decreased between 1929 and 1932 more than 80 percent in 5 of the 11 industries listed under construction. The decrease was more than 70 percent in 8 of the 11 industries.

The average wage and salary payments to wage earners, as computed from reports from employers, decreased between 1929 and 1932 more than 40 percent in 6 of the 11 industries classified under construction. The decrease was more than 35 percent in 9 of the 11 industries.

The greatest decrease in average number reported employed and in total wage and salary payments occurred in the general contracting industry and the greatest decrease in average wage and salary payments occurred in ventilating and heating. In most of the industries classified under construction, the highest peak in number of employees and in total wage and salary payments came earlier than 1929.

Table 12 shows for each industry the percent of decrease from 1929 to 1932 in each of the three items just discussed.

TABLE 12.—PERCENT OF DECREASE IN AVERAGE NUMBER OF WAGE EARNERS EMPLOYED AND TOTAL AND AVERAGE WAGE AND SALARY PAYMENTS, 1932 COMPARED WITH 1929, BY INDUSTRIES

Industry	Average number employed	Total wage and salary payments	Average wage and salary payments
Brick, stone, and cement work	71.7	83.2	40.4
Erecting or installing machinery	52.5	63.1	22.3
General contracting, including wrecking	77.4	86.8	41.6
Oil, gas, or water, drilling or producing	37.1	53.5	26.2
Painting and decorating	68.9	81.1	39.1
Plastering, including lathing and stucco work	74.2	84.6	40.2
Plumbing and steam fitting	65.2	80.1	42.7
Sand and gravel excavating	42.4	63.4	36.5
Sheet-metal work and roofing	61.9	78.3	43.2
Street, road, and sewer contracting	58.3	74.0	37.8
Ventilating and heating	52.9	76.5	50.1
Total, construction industry	66.8	80.5	41.1

PRODUCTIVITY OF LABOR AND INDUSTRY

Productivity, Hours, and Compensation of Railroad Labor

Part 3. Transportation Employees

By WITT BOWDEN, OF THE UNITED STATES BUREAU OF LABOR STATISTICS

THE first and second parts of this series on railroad labor described the principal changes in the amount of revenue traffic and of services required for maintaining traffic facilities, and indicated the trends of employment, productivity, and compensation of all railroad labor and of the principal groups other than those connected directly with transportation. The present article continues the analysis, covering the main groups not discussed in the second article and some of their subdivisions, and describes the principal technological changes affecting them. These additional groups are described by the Interstate Commerce Commission as transportation employees, because their work is directly connected with the handling or control of trains and engines, and of freight, passengers, and baggage. They are classed by the Commission under the following heads: (1) Transportation (other than train, engine, and yard); (2) transportation (yardmasters, switch tenders, and hostlers); and (3) transportation (train and engine). These classifications were not adopted by the Commission until July 1, 1921. Data relating to them are therefore restricted to the period since 1921. For many of the subdivisions, however, the data before and after 1921 are comparable, and some of the transportation groups are therefore traced back as far as 1916, 1926 being taken as the base year for comparison with other groups which are dealt with for the years 1922 to 1932.

Changes in the amount of revenue traffic (revenue ton-miles and weighted revenue passenger-miles combined), together with various changes indicating the amount of service required for maintaining revenue traffic facilities, were described in the earlier articles. Computations of ratios of man-hours to revenue traffic units and to certain other units in the following tables are based on the data previously presented.

Transportation—Other Than Train, Engine, and Yard

The Group as a Whole and Specified Subgroups

EMPLOYEES grouped by the Interstate Commerce Commission under the head of transportation (other than train, engine, and yard) include station agents and handlers of freight, baggage, mail, and express (table 1); dispatchers and others connected with the control of train movements (table 2); flagmen and gatemen (table 5); crews in charge of floating equipment; and several small groups of miscellaneous transportation employees. Table 1 gives data relating to all of these employees and to station agents and handlers of freight, baggage, mail, and express, for the years 1922 to 1932.

TABLE 1.—EMPLOYMENT, RATIOS OF REVENUE TRAFFIC TO MAN-HOURS, AND COMPENSATION OF TRANSPORTATION EMPLOYEES OTHER THAN TRAIN, ENGINE, AND YARD, CLASS I RAILROADS, 1922 TO 1932

[Based on reports to the Interstate Commerce Commission]

Year	Employees		Hours worked		Average number of hours per employee per week	Indexed ratios of output [1] to man-hours (1926=100)	Average compensation per employee per year	Percentage ratios	
	Average number	Index numbers (1926=100)	Number (thousands)	Index numbers (1926=100)				Of group hours to total hours [2]	Of group compensation to total compensation [2]
All employees, transportation group (other than train, engine, and yard)									
1922	204,712	97.7	559,290	97.6	52.5	82.5	$1,409	12.84	10.81
1923	215,675	103.0	590,146	103.0	52.6	92.6	1,415	11.84	10.02
1924	208,619	99.6	569,966	99.5	52.5	90.4	1,440	12.40	10.48
1925	208,546	99.6	570,802	99.6	52.6	95.0	1,453	12.44	10.45
1926	209,468	100.0	572,810	100.0	52.6	100.0	1,466	12.09	10.27
1927	205,026	97.9	558,381	97.5	52.4	98.8	1,487	12.17	10.32
1928	197,467	94.3	536,530	93.7	52.2	102.6	1,512	12.27	10.43
1929	195,948	93.5	530,939	92.7	52.1	106.3	1,524	12.04	10.15
1930	180,881	86.4	482,244	84.2	51.3	100.4	1,515	12.64	10.58
1931	159,038	75.9	417,195	72.8	50.4	93.8	1,502	13.53	11.23
1932	134,265	64.1	346,038	60.4	49.6	86.0	1,355	14.34	11.85
Station agents									
1922	31,497	102.7	80,123	103.8	48.9	77.5	$1,775	1.84	2.09
1923	31,636	103.1	80,765	104.7	49.1	91.2	1,777	1.62	1.85
1924	31,351	102.2	79,834	103.5	49.0	87.0	1,823	1.74	1.99
1925	30,999	101.0	78,351	101.5	48.6	93.2	1,836	1.71	1.96
1926	30,681	100.0	77,162	100.0	48.4	100.0	1,857	1.63	1.91
1927	30,394	99.1	76,023	98.5	48.1	97.8	1,877	1.66	1.93
1928	29,865	97.3	74,142	96.1	47.7	100.0	1,906	1.70	1.99
1929	29,322	95.6	72,497	94.0	47.5	104.9	1,924	1.64	1.92
1930	28,715	93.6	70,179	91.0	47.0	93.0	1,916	1.84	2.12
1931	27,612	90.0	66,259	85.9	46.2	79.6	1,889	2.15	2.45
1932	25,802	84.1	61,240	79.4	45.6	65.5	1,700	2.54	2.86
Handlers of freight, baggage, mail, and express									
1922	57,582	94.3	141,818	92.9	47.4	86.6	$1,108	3.26	2.39
1923	64,898	106.3	162,016	106.2	48.0	89.9	1,144	3.25	2.44
1924	59,811	98.0	147,904	96.9	47.6	92.8	1,147	3.22	2.39
1925	60,740	99.5	151,646	99.4	48.0	95.2	1,163	3.31	2.44
1926	61,050	100.0	152,578	100.0	48.1	100.0	1,169	3.22	2.39
1927	58,609	96.0	144,486	94.7	47.4	101.7	1,168	3.15	2.32
1928	55,485	90.9	136,817	89.7	47.4	107.2	1,187	3.13	2.30
1929	55,353	90.7	136,651	89.6	47.5	110.0	1,199	3.10	2.26
1930	47,691	78.1	112,981	74.0	45.6	114.2	1,142	2.96	2.10
1931	38,957	63.8	89,397	58.6	44.1	116.6	1,092	2.90	2.00
1932	29,993	49.1	66,313	43.5	42.5	119.5	948	2.75	1.85

[1] In revenue traffic units. See part 1, table 1.
[2] For hours and compensation of all employees, see part 1, tables 4 and 6.

The greatest employment in the entire group both in number of employees and in man-hours occurred in 1923. The average number of employees declined steadily after 1923, with the exception of 1926, from 204,712 in 1923 to 134,265 in 1932. The decline in man-hours was somewhat greater, the index number in 1932 (based on 1926) falling to 60.4 as compared with 64.1 for employees. This was due to an increase in part time, the average number of hours per week falling from 52.1 in 1929 to 49.6 in 1932.

Compensation of employees in this group in 1922 was below the average for all employees, as shown by the fact that the group's proportion of total compensation was only 10.81 percent, while the group's proportion of total hours was 12.84 percent. There was a greater disparity in 1932, the group's proportion of total hours increasing 11.7 percent over 1922, while its proportion of total compensation increased only 9.6 percent.

The trends in the subdivisions of the group varied widely. This is illustrated by station agents and by handlers of freight, baggage, mail, and express. Changes in the average number of employees and in man-hours were much smaller in the case of station agents, and much greater in the case of handlers of freight, baggage, mail, and express than in the case of the group as a whole. On an indexed basis, man-hours of the entire group declined from 103 in 1923 to 60.4 in 1932; man-hours of station agents, from 104.7 to 79.4; and man-hours of handlers, from 106.2 to 43.5.

The average annual compensation of station agents was above the average of the group and of all employees; while the average compensation of handlers was considerably below the averages of the group and of all labor, and its disparity was much greater in 1932 than in 1922. Station agents' proportion of total hours was 38 percent greater in 1932 than in 1922, and their proportion of total compensation was 36.8 percent greater. Handlers' proportion of hours was 15.7 percent smaller in 1932 than in 1922, and their proportion of compensation was 22.6 percent smaller.

Different subdivisions of employees in this main group were affected in widely varying degrees by technological changes. The productivity of the entire group, as expressed in terms of revenue traffic units, rose from an index number of 82.5 in 1922 to 106.3 in 1929, and declined to 86 in 1932. The index numbers for station agents were continuously lower than for the group as a whole, while those for handlers of freight, baggage, mail, and express were much higher, and increased continuously throughout the period, from 86.6 in 1922 to 119.5 in 1932, or 38 percent. The work of station agents was but slightly affected by technological changes; and since it was not possible to reduce the number in proportion to the reduction of traffic, the result was a decline in the ratios of revenue traffic to

station agents' aggregate man-hours. The rising ratios in the case of the handlers of freight, etc., were made possible by the comparatively ready adjustment of the amount of employment to changes in the amount of traffic. Complete adaptability of the amount of labor to the amount of traffic would undoubtedly have made possible a higher average productivity, for the work of this group has undergone extensive mechanization. In the case of these various groups there seems to be no adequate means of measuring the services rendered by them in maintaining traffic facilities as contrasted with their productivity in terms of revenue traffic.

Communications and Control of Train Movements

Communications and the control of train movements, as here used, are functions which are performed by train dispatchers, train directors, telegraphers, and telephoners, including wire chiefs and lesser station agents and towermen. These groups all come under the general classification of transportation other than train, engine, and yard.

In these groups the number of employees has been affected to some extent by changes in the amount of revenue traffic, but the principal factors have been technological. The trends of employment, productivity, and compensation are shown in table 2.

TABLE 2.—EMPLOYMENT, RATIOS OF REVENUE TRAFFIC TO MAN-HOURS, AND COMPENSATION OF EMPLOYEES CONNECTED WITH COMMUNICATIONS AND CONTROL OF TRAIN MOVEMENTS, CLASS I RAILROADS, 1916 TO 1932

[Based on reports to the Interstate Commerce Commission]

Year	Employees		Hours worked		Average number of hours per employee per week	Indexed ratios of output [1] to man-hours (1926=100)	Average compensation per employee per year	Percentage ratios	
	Average number	Index numbers (1926=100)	Number (thousands)	Index numbers (1926=100)				Of group hours to total hours	Of group compensation to total compensation
1916	65,765	101.3	215,950	120.2	63.2	70.2	$915	4.12	4.09
1917	67,605	104.1	218,702	121.8	62.2	76.2	990	3.98	3.84
1918	69,499	107.0	216,326	120.4	60.0	80.0	1,353	3.76	3.60
1919	69,845	107.6	196,692	109.5	54.3	82.7	1,733	3.87	4.27
1920	72,071	111.0	202,961	113.0	54.3	87.9	1,936	3.69	3.78
1921	67,206	103.5	183,815	102.3	52.6	73.7	1,881	4.44	4.51
1922	64,794	99.8	179,319	99.8	53.2	80.7	1,826	4.23	4.43
1923	67,406	103.8	187,297	104.3	53.4	91.6	1,821	3.86	4.03
1924	66,037	101.7	184,285	102.6	53.7	87.8	1,856	4.12	4.27
1925	65,105	100.3	180,218	100.3	53.2	94.3	1,876	4.04	4.21
1926	64,925	100.0	179,611	100.0	53.2	100.0	1,901	3.93	4.13
1927	63,602	98.0	175,528	97.7	53.1	98.5	1,928	3.97	4.15
1928	61,746	95.1	169,191	94.2	52.7	102.2	1,962	4.03	4.23
1929	61,242	94.3	166,184	92.5	52.2	106.5	1,974	3.92	4.11
1930	58,160	89.6	156,572	87.2	51.8	97.1	1,972	4.29	4.43
1931	52,841	81.4	140,772	78.4	51.2	87.1	1,952	4.79	4.85
1932	46,283	71.3	121,949	67.9	50.7	76.5	1,762	5.32	5.31

[1] In revenue traffic units.

These groups combined employed 65,765 in 1916 and 72,071 (the maximum) in 1920, and thereafter tended to decline, even during

years of increase in the amount of revenue traffic, falling to 46,283 in 1932. The number of man-hours ranged much more widely, from a maximum index number of 121.8 in 1917 (with 1926 as the base year) to 67.9 in 1932. The average number of hours per employee ranged from 63.2 per week in 1916 to 50.7 in 1932. The average annual compensation per employee in 1916 was $915, and from 1920 to 1931 ranged around $1,900, but declined by 1932 to $1,762. Throughout the period, the group's percentage of total time worked was practically the same as its percentage of total compensation.

The indexed ratios of revenue traffic units to man-hours ranged from 70.2 in 1916 to 106.5 in 1929 and 76.5 in 1932. When these figures are compared with the index numbers of revenue traffic units, which fell to 52.0 in 1932, it is apparent that the work of these groups has been affected vitally by technological changes, for they are required to render substantially the same services, whether revenue traffic is heavy or light. Indeed, the many changes in train schedules due to declines in revenue traffic and to mergers and consolidations have tended to increase the amount of service required of employees connected with communications and the control of train movements. The number of train orders issued is not a measure of work done, because a given order may be repeated to several trains, the execution of different orders in the handling of signals entails varying amounts of work, and train orders themselves are being supplanted by direct signal indications.

The control of train movements was formerly, in the main, by means of telegraphic train orders based on the principle of the time interval between trains and supplemented by the use of signals such as flags, lanterns, fuses, and torpedoes.[1] The manual block system introduced the principle of the space interval as well as the time interval between trains. It was operated on the authority of telegraphic instructions or train orders. The number of block signal stations was increased between the main stations, and this increase, combined with the 8-hour day, made necessary a large additional number of dispatchers and towermen.

A change which tended to reduce the number of employees in these groups was the introduction of the telephone selector, invented in 1907. This enabled the operator to pick out any block signal station and communicate with it without connecting with other stations. After 1907 there was a rapid extension of telephone service. Less time was required than for telegraphic communication, the amount of business handled per operator increased, and the special training and skill of Morse telegraphers was not needed by telephoners.

[1] For a more detailed account of principal technological changes affecting communications and the control of train movements, see Monthly Labor Review, May 1932 (pp. 1017–1028): "Displacement of Morse telegraphers in railroad systems."

A more important factor tending to reduce the number of employees in these groups was the automatic block signal system. Manual block signals required not only signal operation, but also telephonic or telegraphic authority for the operation of signals. Automatic block signaling is based on the authority of the dispatcher, but it greatly reduces the number of block signal station operators. The signals are operated by a track circuit established by the movement of the train, which clears the signals for itself within the block area and at the same time sets the signals against other trains.

The transition from manual block signals to automatic block signals and from the use of the telegraph to the use of the telephone in the transmission of train orders is indicated by table 3.

TABLE 3.—TRANSITION FROM MANUAL TO AUTOMATIC BLOCK SIGNALS AND FROM THE TELEGRAPH TO THE TELEPHONE, AS REPORTED TO THE INTERSTATE COMMERCE COMMISSION, 1908 TO 1932 [1]

Jan. 1—	Manual block signals				Automatic block signals		Miles of road having transmission of train orders by—	
	Miles of road under—		Block signal stations					
	Telegraphic control	Telephonic control	Total number	Number closed part time	Miles of road controlled	Number block-signal sections	Telegraph	Telephone
1908	40,040.3	3,286.8	9,438	2,600	10,819.3			
1909	38,073.8	5,644.0	9,439	3,322	12,174.3	18,605		
1910	39,477.4	8,105.0	9,898	3,713	14,238.9	24,380		26,344
1911	38,612.7	12,198.8	9,912	3,751	17,709.8	29,881	175,211	41,717
1912	37,417.0	16,544.2	10,609	4,400	20,300.0	33,715	169,400	58,584
1913	38,106.3	23,002.1	11,433	4,996	22,196.6	38,982	155,690	68,097
1914	33,935.6	26,241.4	11,007	4,849	26,569.3	46,811	147,338	77,292
1915	37,938.1	28,363.8	11,496	5,799	29,863.5	51,690	149,593	93,467
1916	36,265.6	29,731.2	11,362	5,848	30,942.5	54,171	151,605	99,249
1917	35,540.8	31,082.7	11,416	5,819	32,954.6	57,228	149,456	103,393
1918	33,661.0	31,346.0	11,472	5,701	35,193.1	60,220	142,119	110,404
1919	31,929.5	32,331.5	11,267	5,374	36,989.4	63,334	136,584	113,440
1920	31,436.3	34,419.4	11,337	5,465	37,968.8	67,266	134,667	119,554
1921	31,513.9	33,842.3	12,274	5,224	38,543.9	64,564	133,317	122,022
1922	31,215.5	34,504.3	10,864	5,385	39,061.5	64,464	132,682	123,253
1923	31,300.6	34,857.8	10,714	5,351	40,065.6	66,677	129,162	128,320
1924	32,199.3	35,752.3	11,000	5,363	41,537.1	69,756	132,661	131,329
1925	31,355.6	34,920.4	10,863	5,422	43,838.8	73,138	121,521	132,850
1926	31,992.3	33,573.8	10,841	5,403	45,596.9	73,984	118,628	139,960
1927	28,906.7	34,669.2	10,258	5,203	49,466.1	78,940	113,659	143,374
1928	27,441.3	35,112.1	9,425	5,017	53,616.5	83,126	108,316	149,052
1929	25,113.3	33,358.3	8,860	4,866	56,488.6	85,652	103,585	152,901
1930	23,948.6	32,155.4	8,290	4,654	60,162.0	88,908	101,548	154,277
1931	21,910.5	33,894.0	8,069	4,620	62,726.0	92,296	99,047	154,075
1932	21,602.2	33,408.4	7,264	4,459	63,530.6	92,851	97,623	154,462

[1] See also Monthly Labor Review, May 1932, pp. 1017–1020.

The growth of the manual block signal system is indicated by the increase in the total number of stations, from 9,438 in 1908 to 12,274 in 1921. The number declined after 1921, until in 1932 there were only 7,264 stations, and more than three fifths of these were closed part of the time, indicating the survival of the manual system mainly in areas of comparatively light traffic. The telephone gradually

supplanted the telegraph both in the control of the manual block signal system and in the transmission of train orders.

In addition to the transition from the telegraph to the telephone and from manual block signals to automatic block signals, there has been in recent years a development of automatic train control. This combines the automatic operation of signals and of brakes to stop the train when signal indications are violated. Extensive installations were ordered in 1922. Another innovation has been the use, since 1923, of signals in the cab. These are continually before the engine crew, overcoming poor visibility of wayside signals due to fog or other weather conditions.

The development of interlocking plants has simplified the control of train movements and has facilitated the work not only of employees directly concerned, but of train, engine, and yard crews as well. Interlocking plants are used extensively at terminals and intersections, and they range from the highly intricate plants at such terminals as the Grand Central Station at New York, controlling the movements of hundreds of trains daily, to remote intersections where hours may intervene without a passing train. The operation of these plants has recently been facilitated by the development of remote-control devices making possible the handling of plants by employees at a distance as an incidental part of their duties. In this way operators formerly in attendance at many points have been eliminated.

A significant recent development is centralized traffic control for dispatching trains by direct signal indication through remote control, rather than by train orders. In this way the former functions of the dispatcher in authorizing train movements and of other employees in carrying out the orders by the operation of signals and of switches are combined. The number of installations of centralized traffic control since 1930 is indicated in table 4.

TABLE 4.—CENTRALIZED TRAFFIC-CONTROL INSTALLATIONS, AS REPORTED TO THE INTERSTATE COMMERCE COMMISSION, 1930 TO 1932 [1]

Jan. 1—	Number of installations in service	Miles of road	Number of passing sidings	Number of switches controlled	Number of signals controlled		Total number of switches and signals
					Semaphore	Light	
1930	26	341.1	68	181	142	568	959
1931	44	569.1	113	357	248	982	1,700
1932	58	892.8	177	725	250	1,574	2,726

[1] See also Monthly Labor Review, May 1932, pp. 1020–1023.

The number of installations of centralized traffic control increased from 26 on January 1, 1930, to 58 two years later. The miles of road affected increased from 341.1 to 892.8. The total number of switches and signals affected increased from 959 to 2,726. These installations

not only have eliminated considerable numbers of employees connected directly with communications and the control of train movements, but also have reduced the number of persons connected with the operation of switches and facilitated the work of train, engine, and yard crews.

Communications include not only the control of train movements, but also the handling of ordinary message traffic, to some extent for the general public but mainly, especially in recent years, for the railroad companies. Telephone-switchboard operators not connected directly with transportation are classified under professional, clerical, and general employees, and these, as well as the groups connected directly with the control of train movements, have been affected by technological changes. In general, these changes include an increase in the use of the telephone as compared with the telegraph, the introduction of automatic or dial telephone exchanges, and the supplanting of Morse manual telegraphers by operators of teletypes. The teletype is essentially a typewriter connected with a telegraphic circuit, or with a number of circuits if duplicates of the message are desired.

Before 1920, the changes in modes of communication and of controlling train movements aimed primarily at safety, and they greatly increased the amount of labor required. This was particularly true of the manual block signal system. More recently, technological changes have been concerned with the safety factor but have been perhaps even more significant in economizing labor costs.

Crossing Flagmen and Gatemen

Another group classified by the Interstate Commerce Commission under transportation other than train, engine, and yard consists of crossing flagmen and gatemen. Similar to these in function, and included in table 5, are drawbridge operators. The number of employees in these groups is small. They are included because the changes in their numbers have been largely independent of the amount of revenue traffic and have been brought about almost exclusively by technological changes, which have tended to reduce their numbers, and by increased highway traffic, which has in part counteracted the reduction due to technological changes.

The average number of employees in these groups rose from 17,599 in 1916 to 25,043 in 1920, and in most of the succeeding years declined until in 1932 the number was 19,184. Because of the reduction in number of hours per employee, the index numbers of man-hours show a much greater decline in employment. With a base of 100 in 1926, these numbers ranged from 106.4 in 1918 to 78.4 in 1932. The average number of hours per employee per week in 1916 was 78.6. Even after the 8-hour day was introduced the average number of hours was more than 55 per week until the period of the depression, when, by 1932, the number had fallen to 53.8.

TABLE 5.—EMPLOYMENT, RATIOS OF REVENUE TRAFFIC TO MAN-HOURS, AND COMPENSATION OF CROSSING FLAGMEN AND GATEMEN AND DRAWBRIDGE OPERATORS, CLASS I RAILROADS, 1916 TO 1932

[Based on reports to the Interstate Commerce Commission]

Year	Employees		Hours worked		Average number of hours per employee per week	Indexed ratios of output [1] to man-hours (1926=100)	Average compensation per employee per year	Percentage ratios	
	Average number	Index numbers (1926=100)	Number (thousands)	Index numbers (1926=100)				Of group hours to total hours	Of group compensation to total compensation
1916	17,599	74.3	71,927	105.1	78.6	80.3	$507	1.37	0.60
1917	17,635	74.5	67,276	98.3	73.4	94.4	552	1.22	.55
1918	18,711	79.0	72,835	106.4	76.3	90.4	911	1.26	.64
1919	24,487	103.4	71,323	104.2	57.1	86.8	982	1.40	.83
1920	25,043	105.8	72,081	105.3	56.4	94.3	1,117	1.31	.75
1921	24,627	104.0	70,231	102.6	54.8	73.5	1,064	1.70	.94
1922	23,507	99.3	68,015	99.4	55.6	81.0	907	1.60	.80
1923	24,300	102.6	70,497	103.0	55.8	92.7	911	1.45	.73
1924	24,450	103.3	71,109	103.9	55.9	86.6	924	1.59	.79
1925	24,075	101.7	69,927	102.2	55.9	92.6	926	1.57	.77
1926	23,678	100.0	68,443	100.0	55.6	100.0	928	1.50	.73
1927	23,254	98.2	67,140	98.1	55.5	98.2	950	1.52	.75
1928	22,551	95.2	64,976	94.9	55.4	101.3	949	1.55	.75
1929	21,866	92.3	62,644	91.5	55.1	107.6	954	1.48	.71
1930	21,075	89.0	60,141	87.9	54.9	96.3	963	1.65	.78
1931	20,107	84.9	56,887	83.1	54.4	82.2	953	1.94	.90
1932	19,184	81.0	53,676	78.4	53.8	66.3	853	2.34	1.07

[1] In revenue traffic units.

The indexed ratios of revenue traffic units to man-hours increased from 80.3 in 1916 to 100.0 in 1926, and to 107.6 in 1929, thereafter declining to 66.3 in 1932. These index numbers, when compared with those of revenue traffic units, which fell as low as 52.0 in 1932, indicate important changes in methods of affording protection at highway crossings and bridges. Virtually the same degree of protection is required whether revenue traffic is light or heavy. Indeed, there has been an increase in the amount of protection required because of the increase in the number of crossings and especially in the amount of highway traffic. If there had been no technological changes affecting the work of these groups, the amount of employment must necessarily have increased in spite of declining railway traffic.[2]

Among the technological changes affecting the work of these groups are automatic signals at highway crossings. Detailed figures before 1924 are not available. The manually protected crossings decreased from 53.7 percent of all protected crossings in 1924 to 35.3 percent in 1932, and automatically protected crossings increased from 46.3 percent of all protected crossings in 1924 to 64.7 percent in 1932. Crossings protected by both audible and visible signals increased from 19.4 percent in 1924 to 32.5 percent in 1932.[3]

[2] For estimates of the increased amount of employment that would have been required if there had been no changes in the methods of affording protection at crossings, see Monthly Labor Review, April 1932, p. 766. The estimate for 1930 is to the effect that without automatic signals and grade separations, more than 44,000 additional crossing watchmen would have been required.

[3] For more detailed information, see Monthly Labor Review, April 1932, pp. 759–769.

The amount of employment necessary for the protection of crossings has also been affected materially by grade separations at railway-highway crossings. Statistics before 1925 are not available. The number of grade separations from 1925 to 1932 totaled 2,123. Since grade separations are usually made at crossings where protection is particularly important, the elimination of crossings at the same level by grade separations has presumably almost without exception reduced the amount of employment that would otherwise have been necessary.

In addition to automatic signals and grade separations, another development has affected the amount of labor required. Where a number of gates are located in the same vicinity, as in terminals and at intersections, remote-control devices have made possible the centralized operation of a number of gates by a single employee.

Improved methods of protecting highway crossings not only have eliminated a large number of employees in connection with the immediate work of protecting the crossings, but by speeding up the movement of traffic have facilitated the work of other classes of employees and tended to reduce the amount of employment required for the handling of trains.

Although hours of labor were extremely high, and the responsibilities of crossing watchmen and drawbridge operators were grave, their average compensation in 1916 was $507 per year. The largest average compensation, $1,117, was received in 1920, and by 1932 it had declined to $853. Hours worked were 1.37 percent of the hours of all employees in 1916, 1.50 percent in 1926, and 2.34 percent in 1932—an increase by 1926 over 1916 of 9.5 percent, and by 1932, of 70.8 percent. The proportion of total compensation going to these groups in 1916 was only 0.60 percent as compared with 1.37 percent of total time; and the trend of their compensation, although somewhat favorable to them, gave them in 1932 only 1.07 percent of total compensation as compared with 2.34 percent of total time.

Changes in First Half of 1933

As a whole, the group of transportation employees other than train, engine, and yard crews was affected slightly by the upturn in revenue traffic between March and July 1933. The month of smallest employment in man-hours was February, when the aggregate man-hours fell to 24,093,000. By July, the number had risen to 27,375,000, an increase of 11.4 percent since March, as compared with an increase of 43.5 percent in revenue traffic. In consequence, the productivity of this group, in terms of revenue traffic, rose rapidly. From a low point of 86 in March 1933 the index number of productivity rose to 106.9 in July 1933, the numbers being based on the corresponding months of 1926. Briefly, with an increasing amount of revenue

traffic, the amount of employment rises much more slowly, and even with revenue traffic at the peak of 1926, employment without a radical change of hours would be far below the level of 1926.

Transportation—Yardmasters, Switch Tenders, and Hostlers

CHANGES affecting the group described by the Interstate Commerce Commission as yardmasters, switch tenders, and hostlers are analyzed for the years 1922 to 1932 in table 6.

TABLE 6.—EMPLOYMENT, RATIOS OF REVENUE TRAFFIC TO MAN-HOURS, AND COMPENSATION OF YARDMASTERS, SWITCH TENDERS, AND HOSTLERS, CLASS I RAILROADS, 1922 TO 1932

[Based on reports to the Interstate Commerce Commission]

Year	Employees		Hours paid for		Average number of hours per employee per week	Indexed ratios of output [1] to man-hours (1926=100)	Average compensation per employee per year	Percentage ratios	
	Average number	Index numbers (1926=100)	Number (thousands)	Index numbers (1926=100)				Of group hours to total hours	Of group compensation to total compensation
1922	23,592	97.3	67,978	97.5	55.4	82.6	$2,097	1.56	1.85
1923	26,317	108.6	75,765	108.6	55.4	87.8	2,114	1.52	1.83
1924	24,729	102.0	70,976	101.8	55.2	88.4	2,161	1.54	1.86
1925	24,114	99.5	69,126	99.1	55.1	95.5	2,209	1.51	1.84
1926	24,236	100.0	69,735	100.0	55.3	100.0	2,236	1.47	1.81
1927	23,409	96.6	66,900	95.9	55.0	100.4	2,301	1.46	1.82
1928	22,142	91.4	63,511	91.1	55.2	105.5	2,359	1.45	1.83
1929	21,788	89.9	62,470	89.6	55.1	110.0	2,381	1.42	1.76
1930	20,303	83.8	57,697	82.7	54.7	102.2	2,358	1.51	1.85
1931	17,607	72.6	48,922	70.2	53.4	97.4	2,293	1.59	1.90
1932	14,112	58.2	38,264	54.9	52.1	94.7	2,016	1.59	1.85

[1] In revenue traffic units.

The number of yardmasters, switch tenders, and hostlers combined increased from 23,592 in 1922 to 26,317 in 1923, and in succeeding years, with one exception, declined until in 1932 there was an average of only 14,112. Man-hours declined after 1929 more rapidly than did the average number of employees, the index number of employees for 1932 being 58.2 and of man-hours, 54.9. The average number of hours per employee per week remained virtually constant until 1930, ranging from 55.4 in 1922 to 55.1 in 1929, and falling to 52.1 in 1922.

The indexed ratios of revenue traffic units to man-hours, based on the year 1926, rose from 82.6 in 1922 to a high point of 110.0 in 1929, and fell with declining traffic to 94.7 in 1932. The amount of revenue traffic is not an adequate measure of the services required for maintaining yard facilities, and these services have been vitally affected by technological changes, such as "hump" yards and interlocking plants. During the increase in revenue traffic from March to July 1933 the amount of employment in these groups remained almost unchanged. The average number employed in March 1933 was 12,517, and in July, 12,510. Total man-hours, as well as number of employees,

declined after March, though man-hours were somewhat higher in July than in March. Revenue traffic, on the other hand, increased 43.5 percent. The indexed ratio of revenue traffic units to man-hours rose rapidly to 118.5 in July 1933 as compared with 100 in July 1926. The principal technological changes affecting these groups will be discussed later in connection with yard crews handling trains and engines.

The average annual compensation of employees in these groups in 1922 was $2,097. By 1929 it rose to $2,381, but fell to $2,016 in 1932. The group's proportion of total hours of all employees was only 1.56 percent in 1922 and 1.59 percent in 1932. Its proportion of total compensation was somewhat larger.

Transportation—Train and Engine Crews

The Group as a Whole

UNDER transportation, train and engine, are included crews which handle trains and engines on the road and in the yards, with the exception of switch tenders, who operate switches, and hostlers, who have charge of the handling of engines when not in use for road service or yard switching service. The general status of the group from 1922 to 1932 is shown in table 7.

TABLE 7.—EMPLOYMENT, RATIOS OF REVENUE TRAFFIC TO MAN-HOURS, AND COMPENSATION OF TRAIN AND ENGINE CREWS, CLASS I RAILROADS, 1922 TO 1932

[Based on reports to the Interstate Commerce Commission]

Year	Employees		Hours paid for		Average number of hours per employee per week	Indexed ratios of output [1] to man-hours (1926=100)	Average compensation per employee per year	Percentage ratios	
	Average number	Index numbers (1926=100)	Number (thousands)	Index numbers (1926=100)				Of group hours to total hours	Of group compensation to total compensation
1922	302,083	91.0	847,481	87.1	53.9	92.4	$2,224	19.45	25.17
1923	343,382	103.5	988,201	101.6	55.3	93.9	2,283	19.82	25.76
1924	321,379	96.8	897,514	92.3	53.7	97.5	2,294	19.52	25.71
1925	322,778	97.3	903,505	92.9	53.8	101.9	2,357	19.69	26.23
1926	331,869	100.0	972,560	100.0	56.4	100.0	2,384	20.52	26.45
1927	322,320	97.1	928,534	95.5	55.4	100.9	2,417	20.24	26.38
1928	310,817	93.7	894,195	91.9	55.3	104.5	2,457	20.45	26.68
1929	314,404	94.7	913,385	93.9	55.9	104.9	2,517	20.70	26.91
1930	283,710	85.5	791,925	81.4	53.7	103.8	2,411	20.76	26.41
1931	243,879	73.5	654,406	67.3	51.6	101.5	2,312	21.22	26.51
1932	202,552	61.0	524,125	53.9	49.8	96.4	2,031	21.71	26.79

[1] In revenue traffic units.

Train and engine crews are about one fifth of all employees. The average number was 302,083 in 1922, 343,382 in 1923, and, after an irregular decline, 202,552 in 1932.

The average working week was slightly longer from 1923 to 1929 than in 1922, but thereafter declined to 49.8 hours in 1932. On the

basis of a 6-day week, the average number of hours was more than 8 per day, even in 1932. The high average is due in part to overtime and in part to the inclusion of time paid for but not actually worked. In the case of road train and engine crews, time paid for is computed on the basis of hypothetical distances and speeds, and the actual distance may be smaller while the actual speed may be greater, the result often being a smaller amount of time on duty than is paid for.

The indexed ratios of revenue traffic units to man-hours paid for ranged from 92.4 in 1922 to 104.9 in 1929, the number falling to 96.4 in 1932. These ratios, which are not to be regarded as indicating the effects of technological changes on employment, will be supplemented by other ratios in connection with the discussion of subdivisions of the group.

The average annual compensation per employee of train and engine crews was much above the general average, ranging from $2,224 in 1922 to $2,517 in 1929 and falling to $2,031 in 1932. The group's proportion of total hours in 1922 was 19.45 percent, as compared with 25.17 percent of total compensation. By 1932 the advantage of the group as to compensation had somewhat declined, for its proportion of hours increased 11.6 percent, while its proportion of compensation increased only 6.4 percent.

From January to July 1933 there was a comparatively large increase of employment in train and engine service, the average number in January being 189,938, and in July, 207,826.

Yard Service

Reports to the Interstate Commerce Commission make possible a study of the principal groups of employees engaged in yard service and also in road service from 1916 to 1932. Table 8 deals with yard service, and includes switch tenders as well as yard train and engine crews (yard engineers and motormen, conductors, and foremen, firemen and helpers, and brakemen and flagmen). Hostlers are not included. Man-hours are hours worked, not hours paid for.

The average number of employees in all of these groups combined varied widely, the largest number being 128,258 in 1923, and the smallest number 77,741 in 1932. With 1926 as the base year, the index number of average number of employees in 1916 was 75.1, and in 1932, 60.7; while the index numbers for man-hours were 102.7 in 1916 and 52 in 1932. The average length of the working week declined from 68.6 hours in 1916 to 43 in 1932.

Average annual compensation per employee was lowest in 1916 ($1,246) and highest in 1920 ($2,296), although it approximated the latter in 1928 and 1929. By 1932 it had fallen to $1,790. Average compensation per employee in these groups was somewhat above the general average throughout the period, and the percentages of aggregate hours and wages tended to increase.

TABLE 8.—EMPLOYMENT, RATIOS OF REVENUE TRAFFIC TO MAN-HOURS, AND COMPENSATION OF YARD TRAIN, ENGINE, AND SWITCH CREWS, CLASS I RAILROADS, 1916 TO 1932

[Based on reports to the Interstate Commerce Commission]

Year	Employees		Hours worked		Average number of hours per employee per week	Indexed ratios of output [1] to man-hours (1926=100)	Average compensation per employee per year	Percentage ratios	
	Average number	Index numbers (1926=100)	Number (thousands)	Index numbers (1926=100)				Of group hours to total hours	Of group compensation to total compensation
1916	96,198	75.1	342,920	102.7	68.6	82.2	$1,246	6.54	7.85
1917	114,886	89.6	369,456	110.6	61.8	83.8	1,388	6.72	8.81
1918	127,962	99.9	380,750	114.0	57.2	84.5	1,702	6.61	8.04
1919	118,872	92.8	325,444	97.5	52.7	92.9	1,754	6.40	7.09
1920	124,653	97.3	367,996	110.2	56.8	90.1	2,296	6.69	7.47
1921	106,439	83.1	273,455	81.9	49.4	92.0	1,983	6.61	7.53
1922	109,191	85.2	279,012	83.6	49.1	96.3	1,979	6.58	8.10
1923	128,258	100.1	336,425	100.7	50.4	94.7	2,047	6.93	8.63
1924	119,873	93.5	310,342	92.9	49.8	96.8	2,082	6.94	8.70
1925	123,049	96.0	319,005	95.5	49.9	99.0	2,124	7.15	9.01
1926	128,151	100.0	333,937	100.0	50.1	100.0	2,154	7.31	9.23
1927	124,372	97.1	318,381	95.3	49.2	101.1	2,201	7.21	9.27
1928	120,594	94.1	309,432	92.7	49.3	103.8	2,257	7.37	9.51
1929	124,563	97.2	321,732	96.3	49.7	102.2	2,287	7.60	9.69
1930	111,853	87.3	277,057	83.0	47.6	101.9	2,184	7.59	9.43
1931	95,649	74.6	225,400	67.5	45.3	101.2	2,073	7.67	9.32
1932	77,741	60.7	173,792	52.0	43.0	99.8	1,790	7.59	9.06

[1] In revenue traffic units.

The indexed ratios of revenue traffic units to the man-hours worked by these groups rose from 82.2 in 1916 to 103.8 in 1928, and thereafter declined slightly to 99.8 in 1932. These ratios do not indicate the full extent of the effects of technological changes on amount of employment. The number of trains, engines, and cars in freight service tends to decline with the amount of revenue traffic, thereby reducing the amount of work required of yard transportation employees. The number of passenger trains and engines, however, remains comparatively constant, requiring yard services whether revenue passenger traffic declines or not. As a result, it is possible to reduce the amount of yard employment more readily than the amount of road passenger employment during a period of declining traffic, but it is more difficult to reduce the amount of yard work than the amount of road freight work.

The work of yard employees has been affected by several important technological changes. Automatic block signals, interlockers, and centralized traffic control have mainly affected communications and the control of train movements, but they have facilitated the work of yardmen, especially switchmen and switch tenders. Various minor improvements have more directly affected these groups of employees. Among these are automatic couplers, impact recorders, track scales for automatically weighing and recording weights while cars are moving, and devices using gas, oil, and electricity for melting snow and ice at switches and retarders. These last-named devices have

eliminated much of the manual labor of maintenance of way and structures and have facilitated the work of yard train and engine crews and of switchmen.

The main technological changes affecting yard transportation services are connected with the newer types of classification yards, especially the gravity or "hump" yards for sorting cars. The utilization of differences in elevation—that is, of gravity—in the sorting of cars was introduced as early as 1890 to supplement the "drilling" or "poling" of cars, but the control of the movement and speed of cars on a down grade required the use of large numbers of car riders and entailed serious risks until the car retarder was introduced in 1924. This device, combined with impact recorders and heaters for melting ice and snow, made possible the control of each car individually as it is sent down the classification tracks. Large numbers of car riders formerly necessary were no longer needed and, in addition, the movement and sorting of cars was greatly speeded up.

The effects of the car retarder on employment in one classification yard which early introduced it are shown in table 9.

TABLE 9.—OPERATING ECONOMIES EFFECTED BY CAR RETARDERS IN A CLASSIFICATION YARD[1]

Item	February 1924 (before installation)	February 1925 (after installation)	March 1924 (before installation)	March 1925 (after installation)
Cars humped	42,534	45,283	48,770	51,556
Conductor hours	696	648	744	709
Switchmen and car-rider hours	14,192	2,787	13,424	2,517
Switch-tender hours	3,480	----------	3,720	----------
Hand-brake-tester hours	58	----------	62	----------
Retarder-operator hours	----------	3,360	----------	3,513
Messenger-service hours	----------	280	----------	310

[1] American Railway Association, Signal Section, Proceedings, vol. 23, p. 503. See also Interstate Commerce Commission, *Ex parte 106*, vol. 7, exhibit 109 (hearings on proposed 6-hour day).

Although there was an increase in the number of cars classified in this yard after the installation of car retarders, the number of hours of switchmen and car riders fell from 14,192 in February 1924 before installation, to 2,787 in February 1925 after installation, and a similar change occurred in March 1925 as compared with March 1924. Switch-tender hours (3,480 in February 1924 and 3,720 in March 1924) were eliminated entirely, as were the hours of hand-brake testers. The time added in February 1925 consisted of 3,360 hours of retarder operators and 280 hours of messengers, similar additions appearing also in March 1925. The speeding up of the work by car retarders is also indicated by the fact that the number of hours worked by conductors declined somewhat in spite of the increased number of cars classified.

Road Passenger Service

Employees engaged in road passenger service as classified by the Interstate Commerce Commission include conductors, assistant conductors, and ticket collectors, baggagemen, brakemen, and flagmen, engineers and motormen, and firemen and helpers. Changes in employment, ratios of revenue passenger-miles to man-hours, and compensation of these groups combined are shown in table 10.

TABLE 10.—EMPLOYMENT, RATIOS OF REVENUE TRAFFIC TO MAN-HOURS, AND COMPENSATION OF ROAD PASSENGER EMPLOYEES, CLASS I RAILROADS, 1916 TO 1932

[Based on reports to the Interstate Commerce Commission]

Year	Employees		Hours worked		Average number of hours per employee per week	Indexed ratios of output [1] to man-hours (1926=100)	Average compensation per year per employee	Percentage ratios	
	Average number	Index numbers (1926=100)	Number (thousands)	Index numbers (1926=100)				Of group hours to total hours	Of group compensation to total compensation
1916	57,611	100.9	143,666	112.3	48.0	86.8	$1,514	2.74	5.94
1917	57,435	100.6	146,432	114.4	49.0	97.2	1,586	2.66	5.24
1918	55,366	97.0	145,196	113.5	50.4	106.0	1,948	2.52	4.14
1919	55,282	96.9	145,993	114.1	50.8	114.5	2,312	2.87	4.52
1920	57,858	101.4	153,343	119.8	51.0	110.2	2,643	2.79	4.15
1921	57,560	100.9	138,068	107.9	46.1	97.5	2,511	3.34	5.16
1922	56,660	99.3	131,051	102.4	44.5	97.7	2,341	3.09	4.97
1923	57,981	101.6	135,014	105.5	44.8	101.3	2,370	2.78	4.52
1924	57,596	100.9	132,890	103.9	44.4	98.0	2,453	2.97	4.93
1925	57,236	100.3	130,005	101.6	43.7	99.7	2,511	2.92	4.95
1926	57,073	100.0	127,957	100.0	43.1	100.0	2,529	2.80	4.53
1927	56,527	99.0	124,408	97.2	42.3	97.6	2,594	2.82	4.97
1928	54,625	95.7	119,219	93.2	42.0	95.6	2,651	2.84	5.06
1929	53,998	94.6	117,434	91.8	41.8	95.4	2,725	2.77	5.00
1930	51,979	91.1	109,679	85.7	40.6	88.2	2,695	3.01	5.41
1931	46,625	81.7	94,877	74.1	39.1	83.2	2,631	3.23	5.77
1932	40,548	71.0	79,051	61.8	37.5	77.5	2,332	3.45	6.16

[1] In terms of revenue passenger-miles.

The aggregate number of employees in these groups remained substantially the same from 1916 to 1926, ranging around 57,000. Thereafter there was a continuous decline to 40,548 in 1932. There was a considerably larger variation in the number of man-hours worked. The index number of average number of employees, based on 100 for 1926, rose from 100.9 in 1916 to 101.6 in 1923, and fell to 71 in 1932. The index number for man-hours was 112.3 in 1916, 119.8 in 1920, and 61.8 in 1932. The average number of hours per week was 48 in 1916 and 51 in 1920, and, after a gradual decline, 37.5 in 1932.

The average annual compensation increased from $1,514 in 1916 to $2,643 in 1920, declined for 2 years, then rose to a maximum of $2,725 in 1929, and fell to $2,332 in 1932. Compensation received by road passenger employees was much above the general average in 1916, their proportion of total compensation of all employees being 5.94 percent, while their proportion of total hours was only 2.74 percent. The group failed, however, to retain all of its advantage.

The indexed ratios of revenue passenger-miles to man-hours ranged between 114.5 in 1919 and 77.5 in 1932. These ratios are significant as indicating an important phase of railroad employment in which the amount of labor employed cannot be increased or decreased in proportion to changes in the amount of revenue traffic. As a result, the aggregate productivity of all railroad labor in terms of revenue traffic was materially decreased, and the amount of employment in road passenger service remained comparatively large.

On the other hand, if there had been no technological changes affecting the work of these employees, the decline in employment would have been much smaller. While there is no entirely adequate unit for ascertaining the effects of technological changes, passenger-train miles afford an approximate indication. It is necessary for train schedules to be maintained, and the number of road passenger employees per train remains comparatively constant, whatever may be the number of passengers carried.

The comparative indexed ratios of revenue passenger-miles and of passenger-train miles to man-hours are given in table 11.

TABLE 11.—COMPARATIVE INDEXED RATIOS OF REVENUE PASSENGER-MILES AND OF PASSENGER-TRAIN MILES TO MAN-HOURS WORKED BY ROAD PASSENGER EMPLOYEES, CLASS I RAILROADS, 1916 TO 1932

Year	Revenue passenger-miles to man-hours	Passenger-train miles to man-hours	Year	Revenue passenger-miles to man-hours	Passenger-train miles to man-hours
1916	86.8	89.5	1925	99.7	97.7
1917	97.2	87.7	1926	100.0	100.0
1918	106.0	81.3	1927	97.6	102.0
1919	114.5	82.5	1928	95.6	105.0
1920	110.2	81.7	1929	95.4	106.5
1921	97.5	89.6	1930	88.2	109.7
1922	97.7	92.2	1931	83.2	113.0
1923	101.3	92.7	1932	77.5	117.0
1924	98.0	95.1			

The indexed ratios of revenue passenger-miles to man-hours fell from a base of 100 in 1926 to 77.5 in 1932, and fluctuated widely during the earlier period, 1916 to 1926. The indexed ratios of passenger-train miles to man-hours underwent a much more regular series of changes and continued to rise even during the recent period of rapid decline in revenue passenger-miles to a high point of 117 in 1932.

By taking passenger-train miles as a measure of service rendered by road passenger employees in maintaining facilities for passenger traffic, with 1916 as the base year, and by assuming a constant ratio of passenger-train miles to man-hours, the number of man-hours worked by road passenger employees in 1932 would have been about 103,338,000 instead of 79,051,000, the number actually employed. The difference, 24,287,000 man-hours, may be regarded as an approximate indication of the effects of technological changes on the amount of employment in road passenger service.

The divergent trends of these two sets of ratios resulted from several factors. The decline in ratios of revenue passenger-miles to man-hours was due to the decline in revenue passenger traffic, combined with the fact that it was necessary to maintain train schedules in spite of the falling off of revenue traffic. Some of the factors which account for the maintenance of necessary passenger-train facilities by a comparatively small amount of employment are larger and speedier engines, extension of automatic block signals and centralized traffic control, and improved arrangements for handling trains and passengers at terminals.

Road Freight Service

Similar to road passenger employees are those engaged in road freight service. They include road freight engineers and motormen, conductors, firemen and helpers, and brakemen and flagmen. After 1921, each of these classes was subdivided under through freight and local freight. Although there are considerable divergences in the status of the several subdivisions, the trends have been similar. Table 12 gives data regarding all of the various groups combined.

TABLE 12.—EMPLOYMENT, RATIOS OF REVENUE TRAFFIC TO MAN-HOURS, AND COMPENSATION OF ROAD FREIGHT EMPLOYEES, CLASS I RAILROADS, 1916 TO 1932

[Based on reports to the Interstate Commerce Commission]

Year	Employees		Hours worked		Average number of hours per employee per week	Indexed ratios of output [1] to man-hours (1926=100)	Average compensation per employee per year	Percentage ratios	
	Average number	Index numbers (1926=100)	Number (thousands)	Index numbers (1926=100)				Of group hours to total hours	Of group compensation to total compensation
1916	154,207	101.2	474,073	114.8	59.2	71.2	$1,325	9.04	13.91
1917	165,953	108.9	512,514	124.2	59.4	71.6	1,512	9.33	14.42
1918	169,819	111.4	520,425	126.1	58.9	72.5	1,931	9.03	12.58
1919	151,015	99.1	438,477	106.2	55.8	77.3	2,040	8.62	10.90
1920	163,774	107.5	505,039	122.4	59.3	75.7	2,712	9.18	12.06
1921	140,410	92.1	353,745	85.7	48.4	80.8	2,202	8.55	11.04
1922	141,879	93.1	387,106	93.8	52.5	81.6	2,320	9.12	12.33
1923	163,292	107.1	460,561	111.6	54.2	83.5	2,391	9.48	12.83
1924	149,764	98.3	401,340	97.2	51.5	90.1	2,356	8.97	12.31
1925	148,267	97.3	399,607	96.8	51.8	96.4	2,443	8.96	12.49
1926	152,416	100.0	412,781	100.0	52.1	100.0	2,477	9.04	12.63
1927	147,041	96.5	385,660	93.4	50.4	103.4	2,485	8.73	12.37
1928	141,925	93.1	362,306	87.8	49.1	111.2	2,487	8.63	12.33
1929	141,075	92.6	364,810	88.4	49.7	114.1	2,589	8.61	12.42
1930	124,729	81.8	299,733	72.6	46.2	119.1	2,448	8.21	11.79
1931	105,888	69.5	237,584	57.6	43.2	121.2	2,335	8.09	11.62
1932	87,629	57.5	187,178	45.3	41.1	116.4	2,062	8.17	11.76

[1] In revenue ton-miles.

The average number of employees in road freight service rose from 154,207 in 1916 to 169,819 in 1918, and thereafter fluctuated considerably until 1926, when the number was 152,416. After 1926 there was a continuous fall to 87,629 in 1932. The number of man-

hours varied much more widely. The index numbers, based on 1926, rose from 114.8 in 1916 to 126.1 in 1918 and fell as low as 45.3 in 1932—hardly more than a third of the number in 1918. The average number of hours per employee per week was 59.4 in 1917 and 41.1 in 1932.

The average annual compensation per employee increased from $1,325 in 1916 to $2,712 in 1920, and thereafter ranged below this level, the lowest point being $2,062 in 1932. The group's proportion of total compensation of all employees in 1916 was 13.91 percent, well above its proportion of total hours (9.04 percent). The comparative advantage as to compensation was in part lost, for by 1932 the group's proportion of total hours was only 9.6 percent less than in 1916, while its proportion of total compensation was 15.5 percent smaller than in 1916.

The average man-hour output of road freight employees in revenue ton-miles shows a radically different trend from that of road passenger employees expressed in revenue passenger-miles. The ratios of revenue ton-miles to man-hours, expressed by index numbers, ranged from 71.2 in 1916 to 121.2 in 1931, declining in 1932 to 116.4. This decline was no doubt due to the extreme reduction of revenue tonnage, especially of heavy goods requiring a relatively small amount of labor.

These figures indicate the much greater facility with which the amount of employment in freight service may be reduced during a period of declining traffic than is the case with passenger service. But while the productivity of road freight employees in terms of revenue ton-miles continued to increase as late as 1931 in spite of the decline in amount of revenue freight, their output as measured by the maintenance of traffic facilities increased even more rapidly than the figures of productivity would indicate. It is probable that services required of these employees in maintaining traffic facilities can be measured most adequately by freight-train miles.

The comparative ratios of revenue ton-miles and of freight-train miles to man-hours worked by road freight employees are shown in table 13.

TABLE 13.—COMPARATIVE INDEXED RATIOS OF REVENUE TON-MILES AND OF FREIGHT-TRAIN MILES TO MAN-HOURS WORKED BY ROAD FREIGHT EMPLOYEES, CLASS I RAILROADS, 1916 TO 1932

Year	Revenue ton-miles to man-hours	Freight-train miles to man-hours	Year	Revenue ton-miles to man-hours	Freight-train miles to man-hours
1916	71.2	88.1	1925	96.4	100.0
1917	71.6	83.2	1926	100.0	100.0
1918	72.5	79.9	1927	103.4	103.0
1919	77.3	84.7	1928	111.2	108.2
1920	75.7	81.3	1929	114.1	109.2
1921	80.8	97.5	1930	119.1	116.1
1922	81.6	93.3	1931	121.2	125.0
1923	83.5	91.0	1932	116.4	130.8
1924	90.1	97.6			

The indexed ratios of revenue ton-miles to man-hours rose consistently, with the exception of 1920, from 71.2 in 1916 to 121.2 in 1931, and declined only with the exceptionally large reduction of revenue freight traffic in 1932. The ratios of freight-train miles to man-hours after 1923 show a continuous rise. The lowest point of the index was 79.9 in 1918 and from this point there was an irregular advance to 91.0 in 1923 and a constant advance to 130.8 in 1932.

By taking freight-train miles as a measure of services rendered by road freight employees in maintaining traffic facilities, with 1916 as the base year, and by assuming a constant ratio of freight-train miles to man-hours, the number of man-hours worked by road freight employees in 1932 would have been about 278,483,000 instead of 187,178,000, the number actually employed. The difference, 91,305,000 man-hours, indicates approximately the effects of technological changes on employment.

These trends are essentially a result of technological changes, which would have effected an even greater reduction in employment if freight-train schedules and mileages could be adjusted perfectly to changes in the amount of revenue tonnage. Among the technological changes affecting the movement of freight and the amount of employment are increases in the size and power of steam locomotives, the more economical utilization of fuel, a great increase in the average speed of freight trains, and a considerable enlargement in the average capacity of freight cars.[4] Other changes include the extension of automatic control of signals and switches, which have primarily affected telegraphers, signalmen, and others, but have also greatly facilitated the movement of trains and the work of train and engine crews. Improved facilities for handling trains at terminals have affected the work of road as well as yard crews.

In view of the numerous technological changes affecting virtually all of the groups connected directly with transportation, a return even to the peak of revenue traffic will mean a large amount of unemployment on the basis of prevailing hours of labor.

[4] See part 1, table 5.

NATIONAL RECOVERY ADMINISTRATION

Progress Under National Industrial Recovery Act at Close of 1933

THE National Recovery Administration entered the new year with a preponderance of American industry under codes. Of the estimated total of 24 million workers directly affected by the National Industrial Recovery Act, from 18 to 20 million had been placed under codes of fair competition and fair trade practices.[1] In addition large numbers of employers had signed the President's Reemployment Agreement pending the approval of codes covering their particular operations.

While it is too early to ascertain the results of operation under all codes individually, the National Recovery Administration has received a number of statements from trade groups attesting to their satisfaction with their particular codes. Significant among the reports submitted are those of the iron and steel and the automobile industries, both of which industries have petitioned and been granted the privilege of continuing under their respective codes beyond the expiration dates originally established, i.e. for the iron and steel industry from November 19, 1933, to May 31, 1934,[2] and for the automobile industry from December 31, 1933, to September 5, 1934.

Modification of Hours Provisions Under President's Reemployment Agreement

THE maximum hours provisions of the President's Reemployment Agreement have been modified to permit the necessary overtime work during 2 consecutive weeks in connection with year-end inventories, provided overtime pay at the rate of one and one-half times the regular hourly rate is allowed for hours in excess of the daily and weekly maximums. This modification was ordered on December 18, 1933, by General Johnson on recommendation of the Compliance Board, which body pointed out that provisions for taking inventories provided under the codes were not made a part of the original President's Reemployment Agreement.

[1] National Recovery Administration Release No. 2515, Jan. 2, 1934.
[2] See Monthly Labor Review, January 1934, p. 33.

National Recovery Administrator Empowered to Approve Certain Codes

BY EXECUTIVE order of December 30, 1933, the Administrator of the National Industrial Recovery Act was empowered to approve codes for industries employing 50,000 employees or fewer, the President retaining the power to act in industries of greater magnitude. The Administrator was also authorized to approve "any amendment or modification to, exception or exemption from, or elimination of any one or more provisions of any code of fair competition" heretofore adopted.

Nothing therein contained shall be construed as amending any previous delegations of power to any other department of the Government.

Transfer of Agricultural Codes

THE President made a formal pronouncement concerning jurisdiction over agricultural codes, by an Executive order of January 8, 1934. Under this order certain codes will remain under joint jurisdiction of the Agricultural Adjustment Administration and the National Recovery Administration; others will be transferred in their entirety to the National Recovery Administration but with the Secretary of Agriculture giving written approval of trade practice and related provisions; and others will be transferred to the National Recovery Administration without restriction.

The National Recovery Administration listed in a release of January 9, 1934, the following codes to be retained by the Agricultural Adjustment Administration and the National Recovery Administration jointly:

Anticholera hog serum
Butter
Cheese
Cigarette manufacturers
Corn millers
Corn products
Cotton exchange, New Orleans
Cotton exchange, New York
Cotton traders
Cottonseed crushing
Cottonseed oil refining
Egg and poultry
Feed, hay and straw distributors
Feed manufacturers
Fruits and vegetables, fresh
Grain, country elevators
Grain exchanges
Grain, flour milling
Grain, terminal elevators
Hog exchanges
Ice cream
Linseed oil
Livestock marketing agency industry
Malsters
Meat packers
Milk evaporated
Milk fluid
Naval stores
Oleomargarine
Poultry breeders
Rice
Stockyards operators
Sugar exchanges
Sugar (beet) producing
Sugar refining
Tobacco, cigar manufacturing
Tobacco leaf dealers
Warehouse, cotton
Warehouse, refrigerated
Warehouse, rice
Warehouse, tobacco
Warehouse, wool and mohair

Codes to be transferred to the National Recovery Administration but for which the Agricultural Adjustment Administration must give approval of trade practice provisions, etc., are:

Beans (dried) shippers
Brooms, manufacturing
Canners
Feed, retail
Florists
Hides and skins dealers
Peanuts, millers
Pecan distributors
Pecan shellers
Pickle packing
Pop corn manufacturing
Potato chip manufacturing
Preservers
Rendering
Seed producing and shippers
Soy bean oil manufacturing
Vinegar manufacturing

Codes to be handled in their entirety by the National Recovery Administration will include those not falling in the foregoing classes.

Duties of Government Representatives on Code Authorities

APPOINTMENTS of one to three Government members on 90 code authorities have been made for periods of from 6 months to 1 year, with the length of service so arranged that the terms of no two members of one authority shall expire at once. At least one member must have a background of experience but no present interest in the industry or in any allied industry of that to which he is appointed.

In announcing the appointment of these Government representatives on December 15, 1933, General Johnson stated that Government members must avoid the fact or appearance of dictation or coercion and function as coworkers in an undertaking of public interest, concerned only in the faithful administration of the codes. Their duties are to—

1. Refer with recommendation to the Administrator through the division administrator those matters mentioned in the code as being subject to review and/or the approval of the Administrator.
2. Recommend to the division administrator such other matters as in his judgment are important to the welfare of the industry, or to the public interest, or to the consumers or employees affected by the provisions of the code.
3. Through the code authority secure complete assent to and compliance with all provisions of the code by each unit of the industry.
4. Assist the code authority in connection with the preparation of recommendations for necessary interpretations, modifications, and additions to the code. Consult with the division administrator in reference thereto.
5. Watch and guard against threatened deviations from the code or nonobservance of its terms or action contrary to the principle of N.I.R.A.
6. Constantly scrutinize the operation of the code and see that it does not permit or promote monopolies nor tend to eliminate or oppress small enterprises.
7. Advise with the code authority in seeing that its affairs are handled in a cooperative and fair manner with respect to all units under the code, making sure that the provisions of the code are strictly adhered to with an equitable and fair settlement of all matters covered by the code pertaining to the interests of the general public, consumers, or employees.

8. Assure himself and the division administrator that the industrial members of the code authority are truly representative of the entire industry and elected by a method fair and equitable to all concerned.

Continuance of National Labor Board and Its Powers

THE National Labor Board was continued by order of the President, December 16, 1933. The board's powers were outlined as follows:

By virtue of the authority vested in me by an act of Congress, entitled "An act to encourage national industrial recovery, to foster fair competition, and to provide for the construction of certain useful public works, and for other purposes", approved June 16, 1933 (Public No. 67, 73d Cong.), and in order to effectuate the purposes of that act, it is hereby ordered that—

The National Labor Board, created on August 5, 1933, to "pass promptly on any case of hardship or dispute that may arise from interpretation or application of the President's Reemployment Agreement", shall continue to adjust all industrial disputes, whether arising out of the interpretation and operation of the President's Reemployment Agreement or any duly approved industrial code of fair competition, and to compose all conflicts threatening the industrial peace of the country. All action heretofore taken by this board in the discharge of its functions is hereby approved and ratified.

The powers and functions of this board shall be as follows:

1. To settle by mediation, conciliation, or arbitration all controversies between employers and employees which tend to impede the purposes of the National Industrial Recovery Act, provided, however, the board may decline to take cognizance of controversies between employers and employees in any field of trade or industry where a means of settlement, provided for by agreement, industrial code, or Federal law, has not been invoked.

2. To establish local or regional boards upon which employers and employees shall be equally represented, and to delegate thereto such powers and territorial jurisdiction as the National Labor Board may determine.

3. To review the determinations of the local or regional boards where the public interest so requires.

4. To make rules and regulations governing its procedure and the discharge of its functions.

Volume of Work Handled by National Labor Board

SOME 600,000 workers have been involved in cases which have been handled by the National Labor Board and regional boards. This was reported in a release made public January 6, 1934. Cases handled by the National Labor Board from its formation to December 15, 1933, concerned about 350,000 workers, while 220,000 were concerned in cases dealt with by regional boards. Since then, cases involving 120,000 more have come up. Allowing for duplications the total is about 600,000.

The boards' reports show a high proportion of settlements by agreement, a diminishing number of strikes, increased recourse to the

system of labor boards for arbitration, and a decreasing number of cases listed as still pending.

The following table shows the number of workers involved, number of strikes averted and strikes settled, as reported by the regional boards, December 15, 1933.

WORKERS INVOLVED AND STRIKES AVERTED AND SETTLED BY REGIONAL LABOR BOARDS, AS OF DEC. 15, 1933

City	Number of workers involved	Strikes averted	Strikes settled	City	Number of workers involved	Strikes averted	Strikes settled
Atlanta	6,000	7	.....	New Orleans	10,242	8	5
Boston	11,000	6	10	New York	21,087	22	148
Buffalo	687	3	.....	Philadelphia	8,800	3	3
Chicago	32,663	.....	6	Pittsburgh	5,264	9	3
Cleveland	14,700	8	6	Seattle	7,332	3	.....
Detroit	18,444	.....	73	St. Louis	24,031	.....	7
Indianapolis	4,229	.....	.....	San Francisco	38,000	8	6
Minneapolis-St. Paul	10,953	10	6				
Newark	3,301	.....	.....	Total	216,733	.....	.....

The release continues as follows:

In addition, the National Labor Board itself had taken jurisdiction of 155 cases involving 350,000 workers; 97 cases were strikes or lockouts, 104 cases had been settled, largely by agreement, 14 cases were pending, 25 had been referred to regional boards, and 6 to the Labor Department or special committees. The National Board had held 43 hearings and supervised 31 elections.

Notable features of the work of the regional boards were the number of strikes averted, 87, and of strikes settled, 273 (11 boards).

The reports show a continuation of the diminution in the number of actual strikes and a corresponding increase in the number of cases submitted before strike or lockout. Recourse to the system of boards for purposes of arbitration also is on the increase. The proportion of cases pending is low. The work of the regional boards has received the congratulations of the National Board and deserves the thanks of the country. Sample reports are as follows:

From the New York board: From October 24, when it was appointed, to December 15, total cases, 170; workers involved, 21,087; strikes settled 148; strikes averted, 22; arbitration agreed to, 6; workers reinstated following discrimination because of union activities, 552.

From the New England regional board: Cases, 54, involving 11,000; strikes averted, 6; strikes and lockouts settled, 11; elections held, 7, voting, 3,700.

From the Chicago board: Cases 69, involving 32,663 workers, 13 settlements by agreement involving 17,809, 8 strikes pending, 49 cases under investigation (the fact of taking jurisdiction in many instances having averted strikes).

From the Cleveland board: 49 cases, from 15 northern Ohio cities; settlements by agreement, 16; decisions and recommendations, 12; 8 strikes averted involving 6,100; total workers involved 14,700; returned to work after discrimination for union activity, 300.

From the Detroit board: 102 cases, involving 18,444 workers; settlements, 83; number of strikes, 75; settled, 73.

From the New Orleans board: 13 cases, involving 10,242; strikes and lockouts, 5; strikes averted 8, involving 8,900.

The lists of cases read like a roster of the Nation's industries, so varied have been the problems put before the boards. No case has been too small, as many

cases involve only 2 or 3 workers; and a single case may involve 70,000. All the while it must be remembered that the boards' members, some 170 men, are volunteers serving under Presidential appointment without compensation, comprising busy industrialists and labor leaders, with impartial chairmen drawn generally from the ranks of universities or the bench.

Despite certain recalcitrants, the outstanding thing still is the widespread acceptance of this system of settlement of disputes, which was created by Presidential order adopting a joint proposal of capital and labor. Instances of what are termed "defiances" of the boards naturally make more spectacular headlines than do these quiet labors which, for example, prevent strikes from breaking out and so into the newspapers. Those who do challenge the boards' activities are, I am afraid, people with bad cases and bad consciences. Unquestionably there is a small minority, the same minority which wants all the advantages of the National Recovery measures and none of the responsibilities; and to deal with this minority steps will have to be taken to prevent their getting an advantage over the majority which is honestly endeavoring to attain the better industrial relations necessary to recovery and reform.

Philippine Islands Ruled Not Under National Industrial Recovery Act

THE Philippine Islands do not fall under the provisions of the National Industrial Recovery Act, but goods imported from the Philippine Islands into the United States are subject to the import provisions in section 3 (e)[1] of the act. The above ruling was rendered by the Attorney General of the United States on December 2, 1933.

Appointment of Industrial Relations Boards in Motor-Bus Industry

THE motor-bus code authority, with the approval of the code administrator, is preparing to establish regional industrial relations boards according to the methods followed by the National Labor Board. This was announced by the National Recovery Administration on December 20, 1933. The duties of the boards as outlined are to pass upon and make recommendations regarding complaints between employers and employees in connection with violations of code provisions, and the boards will not, unless the Administrator so orders, intervene in disputes on labor matters not directly concerned with code violations.

In all, 11 regional boards are planned to be set up by geographic areas in conformity with the divisions under the code, each board comprising three employer and three employee members, one of the employer members to be the regional director of the National Association of Motor Bus Operators and two to be designated by the code authority.

[1] See Monthly Labor Review, July 1933, p. 76.

Production Control in Textile Industries

CURTAILMENT of production was authorized during December 1933 under the codes for the cotton textile, hosiery, and silk industries, the orders following petition by the respective code authorities.

The Cotton Textile Institute asked that operation of productive machinery be reduced during December 1933 to 75 percent of the hours otherwise permitted under the code in order "to preserve an equitable sharing of present inadequate business and employment among concerns engaged in the industry." It was also recommended that, to provide procedure for future temporary changes in limitation of hours, the code authority might, with Government approval, require temporary shortening of hours of productive machine operation for 90-day periods. General Johnson approved these recommendations and production was accordingly curtailed to 75 percent, with the exception of the tire-fabric division of the industry.

In the hosiery industry curtailment in production was effected on December 18, 1933, to be operative for 5 consecutive months through a reduction in weekly working time from 5 to 3 days of 8 hours each. Knitting shift hours are ordered reduced from 40 to 24 per week during 3 days, Wednesday, Thursday, and Friday. Where code provisions allow fewer than 40 hours per week the reduction is to be at least 40 percent. While the Wednesday, Thursday, and Friday schedule may be varied upon approval of the code authority, no knitting machines may operate on Saturday or for more than 2 shifts of 8 hours each in any 1 day. In his order approving this action, General Johnson called attention to the fact that the anticipated activity during the last quarter of 1933 did not materialize because of market conditions antedating the code and that following the clearing of the existing situation a more normal productive outlook might be looked for.

In order to meet market conditions in the silk industry a 25-percent reduction in the number of hours of operation of each productive machine for a period of 30 days was ordered along the same lines as for the cotton textile industry, and the same procedure was provided to curtail production for periods not to exceed 90 days in future. The order, as approved by General Johnson, also stated that operators believing that the reduction in production allowed would work undue hardship are free to petition the code authority for an exemption.

Summary of Permanent Codes Adopted Under National Industrial Recovery Act During December 1933

THE principal labor provisions of codes adopted during December 1933 under the National Industrial Recovery Act are shown in summary in the following tabular analysis. This tabulation brings to date the summary carried in the December 1933 and January 1934 issues of the Monthly Labor Review, 195 codes having been approved up to the end of 1933.

In presenting the code provisions in this manner the intention is to supply in readily usable form the major labor provisions, i.e., those affecting the great bulk of employees in the industries covered. For exhaustive information relative to the exempted classes under the hours and wages sections, special provisions for the control of home work, sale of prison-made goods, and studies of occupational hazards, it is necessary to refer to the original codes.

In this issue a special section at the end of the tabular analysis is devoted to amended codes that have already been printed in original form. It is intended to keep a continuing record of amendments to labor provisions as a part of the monthly summary.

Industry and date effective	Minimum wages (excluding apprentices and learners)	Maximum hours	Provision for overtime pay	Minors of specified age excluded from employment
American match (Jan. 8, 1934).	30 cents per hour, females. 38 cents per hour, males.	40 per week, 16 in 2 days, with 36 additional in 3 months (maximum 48 in 1 week, 8 in 1 day), general. 48 per week, machine repair and maintenance men. 168 in 4 weeks, 48 per week, 10 per day, chauffeurs, firemen, etc. (who are not to exceed 10 percent of employees). 56 per week, 8 per day, watchmen. 40 per week averaged over 3 months (maximum 44 in 1 week) office.	1½ regular rate after 40 hours, general. 1½ regular rate after 44 hours, machine repair and maintenance men.	Under 16, general. Under 18, hazardous occupations.
Asphalt and mastic tile (Dec. 18, 1933).	30 cents per hour in southern section, 35 cents per hour in middle section, 40 cents per hour in northern section, common or totally unskilled labor. $14–$15 per week according to population, accounting, clerical, etc.	40 per week averaged over 26 weeks (maximum 48 in 1 week, 6 days per week), general. 12 per day, 6-day week, watchmen.	1½ regular rate after 8 hours, general. 1½ regular rate after 48 hours, emergency maintenance or repair work.	Under 16, general. Under 18, manufacturing operations.
Blouse and skirt manufacturing (Jan. 1, 1934).	$12–$14 per week according to population, general. $12–$36 per week, according to occupation, population, and geographic location, blouse industry. $13.60–$33 per week, according to occupation, population, and geographic location, skirt industry.	35 per week, 7 in 24, 5 days in 7, employees on manual or mechanical processes of manufacture. 40 per week, others. (In peak periods 1 hour per day, 5 hours per week additional allowed during 16 weeks in 1 year.) Operation limited to 1 shift.	1½ regular rate for peak-period overtime.	Under 16, general. Under 18, hazardous or unhealthful occupations.
Can manufacture (Dec. 30, 1933).	32½ cents per hour in United States wage district, and not less than July 15, 1929, rate in Hawaiian wage district, general. $14 per week, office.	40 per week (in peak periods 48 per week during 6 weeks in 6 months, in packers' cans manufacturing; during 3 weeks in 6 months, in general line can manufacturing), general. 56 per week, watchmen.	1½ regular rate after 8 hours or peak-period hours and for work on Sundays and legal holidays, general. 1½ regular rate after 56 hours, watchmen.	Under 16, general. Under 18, stamping, punching and blanking presses.
Cast-iron pressure pipe (Jan. 1, 1934).	30 cents per hour in South, 35 cents per hour in North, general. $15 per week, office.	36 per week (in peak periods 45 per week during 6 weeks in 6 months), 5 days in 7, general. 40 per week averaged over 1 calendar month, 27 days in 31, office. 56 per week, 6 days in 7, watchmen. 8 per day insofar as reasonable.	1½ regular rate after 36 hours and for work on Sundays and national legal holidays, general. Regular rate for Sundays and holidays unless over 36 hours per week, emergency repairs, etc.	Under 16, general. Under 18, hazardous occupations.
Cinders, ashes, and scavenger trade (Jan. 8, 1934).	30–40 cents per hour, according to population.	48 per week, 8 in 24, general. 40 per week, 8 in 24, clerical and office. 54 per week, watchmen. 6-day week.	1½ regular rate after 8 hours.	Under 16, general. Under 18, hazardous or unhealthful occupations.

TABULAR ANALYSIS OF LABOR PROVISIONS IN CODES ADOPTED UNDER NATIONAL INDUSTRIAL RECOVERY ACT DURING DECEMBER 1933—Continued

Industry and date effective	Minimum wages (excluding apprentices and learners)	Maximum hours	Provision for overtime pay	Minors of specified age excluded from employment
Coated abrasives (Jan. 8, 1934).	35 cents per hour (light work) for females and males under 18, 40 cents per hour for males over 18, general. Range from present rate plus 20 percent (but wage not to exceed $12 per week) to $15 per week, according to population, accounting, clerical, etc.	40 in 7 days, 8 in 24 (in peak periods 36 additional in 3 months, maximum 48 in 7 days), general. 40 averaged over 3 months (maximum 48 in 1 week), accounting, clerical, etc. 56 in 7 days, watchmen. 48 in 7 days, shipping crews and employees on automotive or horse-drawn vehicles. 44 averaged over 3 months (maximum 48 in 7 days), engineers, firemen, water tenders, oilers. 48 per week, employees engaged in coating operations.	1½ regular rate after 8 hours per day and 40 per week, general factory employees, engineers, etc., employees on coating operations. 1½ regular rate after 9 hours per day and 44 per week, shipping crews and employees on automotive or horse-drawn vehicles.	Under 16, general. Under 18, hazardous or unhealthful occupations.
Commercial refrigerator (Jan. 1, 1934).	37½ cents per hour in South, 40 cents per hour elsewhere, general. $15 per week, office.	40 per week, 8 per day (in peak periods 48 per week, 9 in 24, during 8 weeks in 6 months), 5 days in 7, general. 40 in 7 days, 9 in 24, 5½-day week, office. 48 in 7 days, 10 in 24, firemen. 48 in 7 days, watchmen. 10 percent tolerance in 7 days, truck drivers, installation, repair and/or erection employees.	1½ regular rate after 8 hours per day and 40 in 5 days, general. 1½ regular rate after 9 hours per day and 44 per week, truck drivers, installation, repair and/or erection employees.	Do.
Concrete pipe manufacturing (Jan. 14, 1934).	27 cents per hour in South, 37 cents per hour elsewhere, general. $14–$15 per week, according to population, accounting, clerical, etc.	40 per week averaged over 3 months (maximum 48 in 1 week), 8 per day, general. 46 per week, crane operators, machine operators and foremen. 64 per week, watchmen. 54 per week, truckmen. 40 per week, accounting, clerical, etc. 52 per week, shipping clerks. 6-day week.	1½ regular rate after 8 hours per day, and for work on Sundays and legal holidays.	Under 18.
Cotton cloth glove manufacturing (Jan. 8, 1934).	30–40 cents per hour, according to occupation, general. $12–$15 per week, according to age, office.	40 per week, 8 in 24 (tolerance of 10 percent, July 1–November 1, provided average for calendar year is 40 per week), general. 54 per week, 6-day week, watchmen. 48 per week, drivers.	1½ regular rate after maximum hours specified, emergency repair, etc.	Under 16, general. Under 18, hazardous or unhealthful occupations
Domestic freight forwarding (Dec. 28, 1933).	40 cents per hour, freight-house laborers. $2 per day of 8 hours, office boys. $2.50 per day of 8 hours, junior clerks. $3.75 per day of 8 hours, senior clerks.	48 per week, averaged over 6 weeks, platform clerks or laborers. 40 per week, office clerks. 12 days in 14.	1½ regular rate after 10 hours per day.	Do.
Dry and polishing mop manufacturing (Dec. 25, 1933).	30 cents per hour, South; 32½ cents per hour, elsewhere.	40 per week averaged over 6 months (maximum 48 in 1 week), general. 44 per week averaged over 6 months (maximum 48 in 1 week), employees on passenger, express delivery or freight service. 48 per week, engineers, firemen, water tenders, oilers. 56 per week, watchmen.	1½ regular rate after 8 hours per day and 40 per week, general, delivery service, engineers.	Do.
Electrotyping and stereotyping (Jan. 8, 1934).	40 cents per hour, laborers; 90 cents per	40 per week, 8 in 24 (in peak periods 520 in 13	1½ regular rate after 8 hours per day and 40 per	Do.

Electrotyping and stereotyping (Jan. 1, 1934).	40 cents per hour, laborers; 90 cents per hour, branchmen; $1 per hour, electrotype and stereotype journeymen; 10 per cent over day rate, night work. $12–$15 per week, according to population, others.	40 per week, 8 in 24 (in peak periods 520 in 13 weeks), mechanical employees. 48 per week, emergency maintenance and repair, etc.	1½ regular rate after 8 hours per day and 40 per week. Double time for work on Sundays and holidays.	Do.
End-grain strip wood block (Jan. 8, 1934).	35 cents per hour in Arkansas, 40 cents per hour elsewhere, general. $14 per week, office.	40 in any 7-day period, 8 in 24, 5 days in 7, general. 40 in any 7-day period, 9 in 24, 5½ days in 7, office.	1½ regular rate after specified daily and weekly hours. Overtime not to exceed 6 hours in 7 days.	Do.
Excelsior and excelsior products (Dec. 17, 1933).	20 cents per hour (light work) for females and 22½ cents per hour for males in South, 25 cents per hour (light work) for females and 30 cents per hour for males in North, general. $14 per week, office.	40 per week (48 per week during 2 periods of 4 weeks each per year), general. 48 per week, office. 42 per week (36 and 48 in alternate weeks), watchmen. 48 per week, truck drivers.	1½ regular rate after 8 hours per day and 40 per week, general and office. 1½ regular rate, emergency repair.	Do.
Folding paper box (Jan. 8, 1934).	30 cents per hour for females and 35 cents per hour for males in South, 35 cents per hour for females and 40 cents per hour for males in North, laborers, mechanics and artisans. $14 per week in South, $16 per week in North, others.	40 per week, 8 per day (8 per week additional for plant-operation work), laborers, mechanical workers or artisans. 56 per week, 6 days in 7, watchmen. 192 in 4 weeks, chauffeurs and truckmen. 168 in 4 weeks, engineers, firemen and electricians. 40 per week averaged over 13 weeks (maximum 48 in 1 week), others.	1½ regular rate after 10 hours per day and 48 per week, plant-cleaning work. 1½ regular rate for hours in excess of 8 per day and 40 per week, plant-operation work. 1½ regular rate after 9 hours per day and 48 per week, chauffeurs and truckmen, engineers, firemen and electricians. 1½ regular rate for hours in excess of schedule, emergency, repairs and maintenance.	Do.
Fur dressing and fur dyeing (Dec. 28, 1933).	35–50 cents per hour, according to age, shops or departments dyeing rabbit and coneyskins exclusively. 45–65 cents per hour, according to age and sex, others.	35 per week, 7 in 24 (40 per week, 8 in 24, during 7 weeks in 6 months), general. 44 per week, engineers, firemen, chauffeurs, drivers. 40 per week averaged over 4 weeks, office, receiving and shipping clerks. 6-day week.	1½ regular rate after 7 hours per day and 35 per week (after 8 per day during 7 weeks in 6 months), general. 1½ regular rate after specified hours, engineers, etc.; office, etc., and for emergency work.	Under 16, general. Under 20, hazardous or unhealthful occupations.
Fur trapping contractors (Dec. 20, 1933).	40 cents per hour with, 50 cents per hour without, board, lodging, traps, etc., general. $15 per week, preparing and curing pelts primarily.	----------	----------	Under 16, general. Under 18, hazardous or unhealthful occupations.

TABULAR ANALYSIS OF LABOR PROVISIONS IN CODES ADOPTED UNDER NATIONAL INDUSTRIAL RECOVERY ACT DURING DECEMBER 1933—Continued

Industry and date effective	Minimum wages (excluding apprentices and learners)	Maximum hours	Provision for overtime pay	Minors of specified age excluded from employment
Furniture manufacturing (Dec. 11, 1933).	30-34 cents per hour, according to geographical area and kind of work. $12 per week, watchmen.	40 per week averaged over period prior to Apr. 1, 1934, and each 6 months thereafter (maximum 45 in 1 week), general. 25 percent tolerance (maximum 40 per week averaged over 2 weeks), emergency, maintenance and repair. 10 percent tolerance, firemen, engineers, and shipping crews. 48 per week averaged over 2 weeks, watchmen and night firemen.	1½ regular rate after 8 hours per day, general. 1½ regular rate for all or any part of shift occurring after 5 p.m. or before 7 a.m.	Under 16, general. Under 18, hazardous or unhealthful occupations.
Grinding wheel (Jan. 8, 1934).	35 cents per hour for females, 40 cents per hour for males, general. $15 per week, accounting, clerical, etc.	40 in 7 days, 8 in 24, 6-day week (in peak periods 36 additional in any 3 months, maximum 48 in 7 days), general. 40 per week averaged over 3 months (maximum 48 in 1 week), 6-day week, accounting, clerical, etc. 56 per week, watchmen. 48 per week to meet emergencies, kiln tenders. 10 percent tolerance (over general and office), shipping crews and truck drivers.	1½ regular rate after 8 hours in 24 or 40 hours in 7 days.	Do.
Hair-cloth manufacturing (Dec. 25, 1933).	$17 per week	40 per week, 8 in 24, general. 10 percent tolerance, emergency. 44 per week, shipping, receiving, storeroom, firemen, and engineers. 4[illegible] per week (36 and 48 in alternate weeks), watchmen. 40 per week averaged over 6 weeks (maximum 48 in 1 week), office. 1 shift of 40 per week, productive machinery.	1½ regular rate after 44 hours per week, emergency maintenance or repair, etc.	Do.
Household ice refrigerator (Jan. 9, 1934).	31½ cents per hour in Kentucky and Tennessee, 35 cents per hour elsewhere, processing. $15 per week, office.	40 per week, 8 in 24, general. 84 in 2 weeks (maximum 48 in 1 week), watchmen.	1½ regular rate after 40 hours per week or 8 in 24.	Do.
Knitted outerwear (Jan. 1, 1934).	32½ cents per hour, South; 35 cents per hour, North.	40 per week, general. 40 per week average, 480 in 12 weeks (maximum 48 in 1 week), office. 8 per day, 40-hour shift; 9 per day, 48-hour shift. Operation limited as follows: Productive machinery 2 shifts of 40 hours, other machinery 1 shift of 40 hours; or, all machinery 1 shift of 40 hours (48 hours for two 4-week periods per year).	1½ regular rate after 40 hours per week.	Do.
Machined waste manufacturing (Dec. 17, 1933).	30 cents per hour, South; 32½ cents per hour, North.	40 per week, 8 in 24, general. 10 percent tolerance, repair-shop crews, firemen, etc. 48 per week, truckmen. 56 per week, watchmen. Operation of productive machinery limited to 1 shift of 40 hours.	1½ regular rate after hours specified, emergency maintenance and repair.	Do.
Medium and low-priced jewelry manufacturing (Dec. 24, 1933).	32½ cents per hour	40 per week (20 percent tolerance in seasonal periods), factory or mechanical workers or artisans. 48 per week (if more than 1 shift, 40 per week), toolmakers, hub and die cutters (who are not to exceed 5 percent of employees).	1½ regular rate after 40 hours per week.	Do.

40 per week, others. 40 per week (10 percent

		40 per week, others. 40 per week (10 percent tolerance), shipping and packing crews. 42 per week (36 and 48 in alternate weeks), watchmen.		
Metal tank (Dec. 25, 1933)	34 cents per hour in South, 40 cents per hour elsewhere, general. $15 per week, office.	40 per week, 8 per day (in period of 9 consecutive hours), general. 8.8 per day (44 per week during 6 weeks in 6 months), firemen, engineers, shipping clerks, etc. 56 per week, watchmen. 40 per week averaged over 1 month (maximum 48 per week), accounting, clerical, etc.	1½ regular rate after hours prescribed, general, and firemen, engineers, shipping clerks, etc.	Do.
Millinery (Dec. 25, 1933)	$13–$14 per week, according to geographical area, general. 45–55 cents per hour, according to geographical area, milliners. $0.60–$1 per hour, according to geographical area, cutters and operators. $0.70–$1.19 per hour, according to geographical area, blockers.	37½ per week, 7½ in 24, general. 45 per week, office, shipping and receiving crews, engineers, and firemen. 5 days in 7.	1½ regular rate during 6 weeks in 1 season, if overtime recommended by code authority and approved by Administrator.	Under 16.
Motor-vehicle storage and parking trade (Dec. 11, 1933).	50 cents per hour, mechanical workers or artisans.[1] $13–$14 in South, $14–$15 in North, according to population, others.	44 per week, 9 per day (in peak periods 44 per week averaged over 4 weeks, maximum 48 in 1 week, 10 per day), office. 6 days per week, watchmen. 48 per week, cashiers (⅔ of time as such) and filling-station workers (⅓ of time as such). 44 per week, mechanical workers (⅓ of time as such). 54 per week, others. 10 per day, all except office.	No provision	Do.
Nonferrous foundry (Dec. 25, 1933).	27 cents per hour for females, 32 cents per hour for males in South, 35 cents per hour for females, 40 cents per hour for males in North, general. $12–$15 per week, according to population, office.	40 per week (in peak periods 48 per week, during 4 weeks in 6 months, 6 days per week), general. 10 percent tolerance, melters, engineers and firemen (who are not to exceed 3 percent of employees), and repair-work employees. 56 per week, watchmen. 8 per day insofar as reasonable.	1½ regular rate after hours prescribed, whenever sufficient qualified employees are not available.	Under 16, general. Under 18, hazardous occupations.
Oxyacetylene (Dec. 18, 1933).	35 cents per hour in South, 40 cents per hour elsewhere, hourly employees. $14 per week, South, $15 per week, North, others.	40 per week averaged over 6 weeks (maximum 48 in 1 week), general. 44 per week, engineers, firemen, loaders, truck drivers.	1⅓ regular rate after 44 hours, engineers, etc. 1⅓ regular rate after established hours, emergency work, etc.	Do.
Paper distributing (Jan. 1, 1934).	34 cents per hour for females, 37½ cents per hour for males, mechanical or factory operations. $14–$15 per week, according to population, others.	40 per week, 8 per day, general. 56 per week, 6 days per week, watchmen. 48 per week, 9½ per day, outside deliverymen.	1½ regular rate after 8 hours per day, 40 per week (overtime limit, 8 hours per week), general. 1½ regular rate after 9½ hours per day, 48 per week (overtime limit, 4 hours per week), outside deliverymen. 1½ regular rate after hours specified, emergency repairs, etc.	Under 16, general. Under 18, hazardous occupations. From 14 to 16, 3 hours per day between 7 a.m. and 7 p.m. (where permitted by law, and not to interfere with school hours), not in manufacturing or mechanical departments.

[1] Unless rate was lower on July 15, 1929, and in no case less than 40 cents an hour.

TABULAR ANALYSIS OF LABOR PROVISIONS IN CODES ADOPTED UNDER NATIONAL INDUSTRIAL RECOVERY ACT DURING DECEMBER 1933—Continued

Industry and date effective	Minimum wages (excluding apprentices and learners)	Maximum hours	Provision for overtime pay	Minors of specified age excluded from employment
Paper making machine builders (Dec. 18, 1933).	40 cents per hour, employees making products. $15 per week, others.	40 per week, 8 in 24, employees making products. 10 percent tolerance, maintenance, shipping, etc. 48 per week in 8 weeks in 6 months, in seasonal or peak demand. 56 per week, 6 days out of 7, watchmen. 40 per week averaged over 1 month (maximum 48 in 1 week), accounting, clerical, etc.	1½ regular rate after 8 hours per day and 40 per week, emergency maintenance or repair, shipping, etc., and during peak periods.	Under 16, general. Under 18, hazardous or unhealthful occupations.
Paper stationery and tablet manufacturing (Jan. 8, 1934).	30 cents per hour in South, 33 cents per hour for females and 38 cents per hour for males in North, laborers, mechanical workers or artisans. $12–$15, per week according to population, others.	40 per week, 8 per day, laborers, mechanical workers, or artisans. 48 per week, skilled workers (not to exceed 10 percent of total employees), when necessary to avoid reduction of employment of others. 40 per week average (maximum 48 in 1 week), 8 per day, employees making papeterie (September to December), and employees making tablets and school paper (July to October). 56 per week, 8 per day, watchmen. 168 in 4 weeks, 48 in 1 week, 10 per day, chauffeurs, firemen, etc. 40 per week averaged over 13 weeks (maximum 48 in 1 week), others. No Sunday operation of plants. Female laborers, mechanical workers, or artisans not to be employed between 7 p.m. and 7 a.m.	1½ regular rate after 8 hours per day and 40 per week, skilled workers (not to exceed 10 percent of total employees), to avoid reduction of employment of others.	Do. Do.
Photo-engraving (Jan. 1, 1934).	30–80 cents per hour, according to years of experience, apprentices. $1 per hour, day work, $1.10 per hour, night work, journeymen. $12–$15 per week, according to population, others.	40 per week, 8 in 24 (total hours, 520 in 13 weeks), production employees. 44 per week, emergency maintenance and repair men, janitors, drivers, delivery men.	1½ regular rate after 8 hours in 24 and 40 per week. Double pay for work on Sundays and customarily observed holidays.	
Pyrotechnic manufacturing (Dec. 11, 1933).	32½ cents per hour for females, 37½ cents per hour for males, commercial fireworks division. 35 cents per hour for females, 40 cents per hour for males, display fireworks division. 40 cents per hour, fusee division.	40 per week, 8 in 24 (in seasonal periods, maximum 48 per week, 2 months in first 6-month period, 1 month in second 6-month period, factory), commercial fireworks division. 40 per week, 8 in 24 (maximum 48 per week, Apr. 15 to Sept. 15, factory), display fireworks division. 35 per week, 7 in 24, fusee division. 40 per week averaged over 3 months (maximum 48 in 1 week), office. 48 per week, janitors and boiler-house employees. 44 per week with 10 percent tolerance during seasonal periods specified, truckmen, all divisions.	1⅓ regular rate after hours specified, emergency repair, etc.; regular rate, emergency employment owing to fire, etc.; all divisions. 1⅓ regular rate after 8 hours per day and 40 per week, commercial fireworks division.	Under 18.
Rayon and silk dyeing and printing (Dec. 21, 1933).	35 cents per hour for females, 45 cents per hour for males over 18 and 80 percent thereof for males under 18.	40 per week, general. 48 per week, engineers, electricians, machinists, firemen, maintenance and transportation crews, watchmen. 40 per week averaged over 6 months (maximum 48 in 1 week), office. 40 per week, 8 per day (additional 2 hours per day tolerance, maximum 48 in 1 week, continuous chemical processes), productive employees. Operation of plant limited to 96 per week, of productive machinery to 80 per week	No provision	Under 16, general. Under 18, hazardous or unhealthful occupations.

		tinuous chemical processes), productive employees. Operation of plant limited to 96 per week, of productive machinery to 80 per week (120 per week during 6 months in 1 year, velvet processing).		
Retail food and grocery trade (Jan. 1, 1934).	(2)	(2)	(2)	(2).
Refractories (Dec. 28, 1933).	25 to 40 cents per hour, according to wage district, common labor. $14–$15 per week, according to population, office.	40 per week averaged over 30 days, 8 per day, general. 56 per week, 6 days in 7, watchmen. 48 per week averaged over 30 days, employees in continuous processes, etc. (who are not to exceed 10 percent of employees).	No provision	Under 16, general. Under 18, underground.
Rolling steel door (Jan. 1, 1934).	40 cents per hour, general. $15 per week, office.	36 per week, 8 in 24, 5 days in 7 (in peak periods 40 per week during 8 weeks in 6 months), general. 40 per week, 9 in 24, 5½ days in 7, office.	1½ regular rate after 8 hours, 8 per day and 40 per week.	Under 16, general. Under 18, hazardous or unhealthful occupations.
Rubber manufacturing (Dec. 25, 1933).	35 cents per hour, general. $12–15, according to population, salaried employees. 35 cents per hour, nonmanufacturing; 40 cents per hour, manufacturing; rainwear division.	40 per week, 8 in 24 (80 per year additional allowed, but not over 48 in 1 week), general. 45 per week, maintenance, engineers, shipping, watchmen, etc. 40 per week averaged over 1 month (maximum 48 in 1 week), accounting, office, etc. 40 per week, 8 in 24, 5 days per week, rainwear division.	1½ regular rate after 40 hours, general. 1½ regular rate after 45 hours, emergency, maintenance, etc. Overtime prohibited, rainwear division.	Under 16, general. Under 18, hazardous occupations.
Rubber tire manufacturing (Dec. 25, 1933).	40 cents per hour, general.[1] $12–$15 per week, according to population, salaried employees.	36 per week averaged over 1 calendar year, 8 in 24 (maximum 42 in 1 week), general. 40 per week, 8 in 24, maintenance crews, engineers, firemen, shipping crews, tire testers. 84 in 2 weeks, 6-day week, watchmen. 40 per week averaged over 1 month (maximum 48 in 1 week), accounting, office, sales, service.	1½ regular rate after 36 hours, general. 1½ regular rate after 8 hours per day, 40 per week, emergency, maintenance, etc.	Do.
Savings, building and loan associations (Dec. 31, 1933).	$12–$15 per week, according to population, general. 10 percent above general rates, part-time workers.	40 per week averaged over 13 weeks	No provision	Under 16, general. Persons 14 to 16 permitted to work 3 hours per day (not to interfere with school hours).
Set-up paper box manufacturing (Jan. 1, 1934).	32½ cents per hour for females and 37½ cents per hour for males in North, 30 cents per hour for females and 32½ cents per hour for males in South, laborers, mechanics, artisans. $14 per week, others.	40 per week (annual tolerance of 7½ percent, maximum 48 in 1 week), 8 per day (unless employer elects 10), laborers, mechanical workers, artisans. 56 per week, 6 days in 7, watchmen. 40 per week averaged over 4 weeks, chauffeurs and truckmen. 42 per week averaged over 4 weeks, engineers and firemen. 40 per week averaged over 13 weeks (maximum 48 in 1 week), others. No females to be employed between 10 p.m. and 6 a.m.	1½ regular rate after daily or weekly maximum, laborers, etc. 1½ regular rate after 9 hours, engineers, and firemen.	Under 16, general. Under 18, hazardous or unhealthful occupations.

[1] No change in labor provisions approved Nov. 15, 1933. See Monthly Labor Review, January 1934, p. 42.
[2] Unless rate was lower on July 15, 1929, when rate on that date shall apply but in no case less than 35 cents per hour.

TABULAR ANALYSIS OF LABOR PROVISIONS IN CODES ADOPTED UNDER NATIONAL INDUSTRIAL RECOVERY ACT DURING DECEMBER 1933—Continued

Industry and date effective	Minimum wages (excluding apprentices and learners)	Maximum hours	Provision for overtime pay	Minors of specified age excluded from employment
Shoe and leather finish, polish, and cement manufacturing (Jan. 8, 1934).	32½ cents per hour for females, 37½ cents per hour for males, shoe-polish division. 35 cents per hour for females, 40 cents per hour for males, shoe and leather finish and cement division.	40 per week averaged over 1 year, 8 in 24 (in peak periods 48 per week during 12 weeks in calendar year), general. 44 per week, engineers, oilers, etc. 40 per week averaged over 3 months (maximum 48 in 1 week), office. 44 per week averaged over 3 months (maximum 48 in 1 week), employees on passenger, express, delivery, or freight service.	1½ regular rate after 8 hours per day and 40 per week, general. 1½ regular rate after 44 hours, engineers, oilers, etc.	Under 16.
Silverware manufacturing (Dec. 25, 1933).	35 cents per hour	40 per week, averaged over 3 months (maximum 48 in 1 week), 8 per day, general. 48 per week, hub and die cutters (total number not to exceed 5 percent of employees). 42 per week averaged over 2 weeks (36 and 48, alternately), watchmen and engineers. 40 per week averaged over 6 months, emergency repair, etc.	No provision	Under 16, general. Under 18, hazardous or unhealthful occupations.
Smelting and refining of secondary metals into brass and bronze alloys in ingot form (Dec. 31, 1933).	35 cents per hour, general. $15 per week, office.	40 per week (in peak periods 48 per week during 6 weeks in 6 months, 10 per day, 6-day week), general. 56 per week, 6-day week, watchmen. 8 per day insofar as reasonable.	1½ regular rate after 40 hours.	Do.
Stone finishing machinery and equipment (Dec. 26, 1933).	40 cents per hour, general. $14–$15 per per week, according to population, accounting, clerical, etc.	40 per week, 8 per day (in peak periods, 48 during 6 weeks in 6 months), general. 10 percent tolerance (but not to exceed 44 per week during 6 weeks in 6 months), preparation and care of plant. 48 in 1 week of 7 days, factory workers and watchmen combined; 49 per week, regular watchmen. 40 per week averaged over 6 months (maximum 44 per week in 2 successive weeks), accounting, clerical, etc.	1½ regular rate after 8 hours per day and 40 per week.	Under 16, general. Under 18, hazardous occupations.
Valve and fittings manufacturing (Dec. 20, 1933).	32 cents per hour in South, 40 cents per hour elsewhere, factory or mechanical workers.[4] $14–$15 per week, according to population, accounting, clerical, etc.	40 per week, 8 per day, factory or mechanical workers. 40 per week, accounting, clerical, etc. 56 per week, 6 days in 7, watchmen.	do	Do.
Velvet (Jan. 8, 1934)	$13 per week	40 per week, 8 in 24, general. 40 per week averaged over 3 months (maximum 48 in 1 week), office. 56 per week, watchmen. Operation of productive machinery limited to 2 shifts of 40 hours each.	1½ regular rate after 40 hours, emergency repair.	Under 16.
Watch case manufacturing (Jan. 1, 1934).	35 cents per hour	40 per week (to meet peak demands 96 per year additional), 8 in 24.	1½ regular rate after 40 hours, general. 1½ regular rate after 40 hours, emergency repair.	Under 16, general. Under 18, hazardous or unhealthful occupations.
Wax paper (Jan. 1, 1934)	35 cents per hour for females and 40 cents per hour for males in North, 30 cents per	40 per week averaged over 26 weeks (maximum 48 in 1 week), laborers, mechanical workers, arti-	1½ regular rate after 8 hours, laborers, etc. 1½	Do.

Wax paper (Jan. 1, 1934)	35 cents per hour for females and 40 cents per hour for males in North, 30 cents per hour for females and 35 cents per hour for males in South, laborers, mechanical workers, artisans. $15–$16 per week, according to population, others.	40 per week averaged over 26 weeks (maximum 48 in 1 week), laborers, mechanical workers, artisans. 56 per week, 8 per day, watchmen. 168 in 4 weeks, chauffeurs, firemen, etc. 40 per week averaged over 13 weeks (maximum 48 in 1 week), others. Plant operation limited to 144 per week.	1½ regular rate after 8 hours, laborers, etc. 1½ regular rate after 9 hours, Chauffeurs, firemen, etc.	Do.
Wholesale automotive trade (Dec. 28, 1933).	40 cents per hour, general. $14–$15 per week according to population, office or salaried employees.	44 per week, 8 in 24 (48 per week during 2 weeks in 6 months).	No provision	Do.
Agriculture				
Alcoholic beverages importing (Dec. 3, 1933).	(5)	(5)	(5)	(5)
Alcoholic beverage wholesale (Dec. 10, 1933).	(5)	(5)	(5)	(5)
Brewing (Dec. 5, 1933)	(5)	(5)	(5)	(5)
Commercial and breeder hatchery (Jan. 1, 1934).	$15 per week, accounting, clerical, etc. $16 per week, watchmen whose sole function is watching. 37½ cents per hour, watchmen with other duties also, and employees paid by the hour.	40 per week, 8 per day, general. 56 per week, watchmen whose sole function is watching; 43 per week, 7 per day, those with others duties also. 48 per week, deliverymen. 48 per week, managers at branch plants established prior to July 1, 1933.	1½ regular rate after 8 hours per day and 40 per week.	Under 16, general. Under 18, hazardous occupations.
Distilled spirits [6] (Nov. 27, 1933).	(5)	(5)	(5)	(5)
Distilled spirits rectifying (Dec. 10, 1933).	(5)	(5)	(5)	(5)
Southern rice milling [6] (Dec. 1, 1933).	25 cents per hour, mill and warehouse. $13.50 per week, office.	48 per week, 8 in 24, general. 44 per week, office. Machine operation limited to 96 per week.	1½ regular rate after standard hours, firemen, watchmen, repair or maintenance crews.	Under 16, general. Under 18, hazardous occupations.
Wine (Dec. 28, 1933)	(5)	(5)	(5)	(5)

Amended codes [7]

Automobile manufacturing (Sept. 5, 1933; amended Jan. 1, 1934).	40–43 cents per hour, according to population, factory. $14–$15 per week, according to population, office.	*40* per week, general. 42 per week, supervisory staff and preparation workers. 40 per week (maximum 48 in 1 week), office. 6 days per week.	No provision	Under 16.
Cast-iron soil pipe (Sept. 11, 1933; amended Dec. 18, 1933).	32 cents per hour, South; 40 cents per hour, elsewhere.	27 per week, 8 per day, general. 40 per week, 8 per day, clerks, etc. *56 per week, 6-day week, watchmen.* Operation limited to 1 shift.	do	Under 16, general. Under 18, foundry operations.

[4] Females on light work may be paid 90 percent of minimum rate but not less than 30 cents an hour.
[5] Provisions not yet decided at time of approval by President.
[6] This code was approved in November 1933, but was not included in the tabular analysis for that month, given in the January 1934 issue of the Monthly Labor Review.
[7] Amendments given in italics.

TABULAR ANALYSIS OF LABOR PROVISIONS IN CODES ADOPTED UNDER NATIONAL INDUSTRIAL RECOVERY ACT DURING DECEMBER 1933—Continued

Industry and date effective	Minimum wages (excluding apprentices and learners)	Maximum hours	Provision for overtime pay	Minors of specified age excluded from employment
Cotton garment (Nov. 27, 1933; amended Dec. 18, 1933).	30 cents per hour in South, 32½ cents per hour in North, general. 35 cents per hour, manufacturing. 45 cents per hour, operators; 75 cents per hour, cutters, sheep-lined and leather garments. *34 cents per hour in South, 37 cents per hour in North, production of men's 100-percent cotton suits.*	40 per week, 8 per day, manufacturing. 40 per week averaged over 3 months, office. Operation limited to 1 shift.	No provision	Under 16.
Dress (Nov. 13, 1933; amended Dec. 15, 1933).	$15 per week for cleaners and pinkers, $45 per week for cutters, higher-priced garments, city of New York, and lower-priced garments, eastern area; $15 per week for cleaners and pinkers, $46 per week for cutters, lower-priced garments, city of New York; 90 percent of New York rates for eastern metropolitan area and for higher-priced garments in eastern area; 85 percent of New York rates *for Chicago and Cleveland area; 70 percent of New York rates, northern section; and 60 percent of New York rates, southern section of western area.* $14 per week, all other employees.	35 per week (extra hours by special permission during 6 weeks in any season), 5-day week, manufacturing. 40 per week (extra hours by special permission during 6 weeks in any season), others. Operation limited to 1 shift.	1½ regular rate	Do.
Men's clothing (Sept. 11, 1933; amended Dec. 18, 1933).	*34*–37 cents per hour in South, *37*–40 cents per hour in North, manufacturing. $13 per week in South, $14 per week in North, nonmanufacturing. *60 cents per hour in South,* 75 cents per hour *in North,* off-pressers. *85 cents per hour in South,* $1 per hour *in North,* cutters.	36 per week, 8 per day, general. 40 per week averaged over year, repair-shop crews, etc. Operation limited to 1 shift.	No provision	Do.
Textile bag (Oct. 2, 1933; amended Dec. 23, 1933).	$12 per week, South; $13 per week, North	40 per week, 8 in 24 (in peak periods 48 per week during 8 weeks in 1 year, maximum 48 in 1 week; *10 per day, sewing, printing, engraving departments, etc.*). Operation limited to 2 shifts.	No general provision. 1¼ regular rate, repair-shop crews, etc.	Do.

INDUSTRIAL RELATIONS AND LABOR CONDITIONS

Annual Report of the Secretary of Labor, 1932–33

AMONG the recommendations made by the Secretary of Labor in her annual report for the fiscal year 1932–33 are the setting up of some form of unemployment reserves in the different States, the stabilization of employment, low-cost housing, various provisions for the safety of workers, greater cooperation between State and Federal labor departments, the meeting of the problem of old-age security, and conference methods of approach in connection with the carrying on of the work of the United States Department of Labor. Reviewing some of the forward steps taken in the field of labor under the recent emergency measures, the Secretary expresses the confident expectation that the following reforms of basic importance will be made permanent:

1. Shorter hours throughout industry and trade.
2. Higher standard of wages, and particularly, a machinery for regulating the minimum levels of wages.
3. The permanent abolition of child labor.
4. The use of the Government purchasing power for supplies and equipment to maintain high industrial standards.
5. Boards for hearing locally and investigating and making findings on all complaints of industrial practices and in cases of industrial disputes.
6. The general recognition of the desirability of competent wage earners' representation, selected through organization, in all matters affecting industry, labor conditions, and civic development.

The Secretary advocates the establishment of a Division of Labor Standards and Service in the Department of Labor "to study specific and local problems and make recommendations of industrial sanitation, health and safety, security, wages, working hours, housing, adult and vocational education, community opportunity, and many other factors which bear upon the lives of our workers."

A résumé of the activities of the various bureaus and services of the Department of Labor is included in the report, copies of which are now available for distribution.

Individual and Collective Bargaining Under National Industrial Recovery Act

INDIVIDUAL bargaining has not been eliminated by section 7 (a) of the National Industrial Recovery Act and employee representation plans have expanded greatly, according to a recent study of the National Industrial Conference Board. This study deals with the trends in employer-employee relations as they are developing under the collective bargaining provision of the N.I.R.A. The study was undertaken to determine the extent to which the different methods of bargaining (i.e., through trade unions, company plans of employee representation, or individual dealing between employer and employee) were being employed in the adjustment of labor relations. It is pointed out that the results shown by this survey are "only a record of the first stage in developments resulting from conditions created by the National Industrial Recovery Act."

The information was secured through a questionnaire addressed to companies engaged in manufacturing and mining, all companies listed as having a capitalization of $500,000, or higher, being included in the list. The inquiry was sent to 10,335 companies, and replies were received from 3,314 companies, employing a total of 2,585,740 workers. Twenty-four and three tenths percent of the reporting companies employed fewer than 100 wage earners, 62.3 percent between 100 and 1,000 workers, and 13.4 percent 1,000 workers and over. This distribution between small, medium, and large firms was regarded as indicating that a generally representative sample had been secured.

The inquiry, which was confined to a few questions in order to induce as large a response as possible, covered the number of employees; the manner in which the company dealt with employees, that is, either individually, through a plan of employee representation, or through an organized labor union; the date when the agreement became operative; and, in case there was a plan of employee representation, whether it was the joint-committee type, with representatives of both employees and management, or the employee-committee type, representing employees only. If more than one type of representation plan was used, the number or proportion of workers affected by each policy was asked.

In the classification of the plans it was decided that committees selected by the employees and having an established and permanent status should be regarded as being employee-representation committees but that temporary special committees appointed to represent the workers when matters of special interest arise should not be so classified nor should standing committees, such as a safety committee, which meets periodically for consideration of matters within its special jurisdiction. However, it was felt that too-strict conformity with the provision of long-established plans should not be required for

qualification as employee representation and that the main consideration was that the committee should be selected by the employees and should be permanent. The data presented in the report relate to the early part of November 1933, and although several companies reported that changes in the method of dealing with employees would probably occur in the near future, such companies were classified according to the methods followed at the time the report was made.

The study showed that of the total number of employees in the establishments reporting, 1,180,580, or 45.7 percent, dealt with employers individually; 1,164,294, or 45 percent, dealt with employers through employee-representation committees; and 240,866, or 9.3 percent, through organized labor unions.

Table 1 shows the number and proportion of companies and wage earners following one method exclusively or a combination of methods:

TABLE 1.—NUMBER AND PROPORTION OF COMPANIES AND WAGE EARNERS AFFECTED BY VARIOUS POLICIES OF CONDUCTING EMPLOYER-EMPLOYEE RELATIONS

Method of conducting employer-employee relations	Companies		Wage earners under—							
			Individual bargaining		Employee representation		Union		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Individual bargaining exclusively	2,284	68.9	1,013,016	39.2					1,013,016	39.2
Employee representation exclusively	552	16.8			894,327	34.6			894,327	34.6
Union agreement exclusively	230	6.9					189,756	7.3	189,756	7.3
Combination, individual bargaining and union	147	4.4	81,180	3.1			39,240	1.5	120,420	4.7
Combination, individual bargaining and employee representation	58	1.8	70,248	2.7	243,182	9.4			313,430	12.1
Combination, employee representation and union	21	.6			15,916	.6	8,140	.3	24,056	.9
Combination, individual bargaining, employee representation, and union	18	.6	16,136	.6	10,869	.4	3,730	.1	30,735	1.2
Total	3,314	100.0	1,180,580	45.7	1,164,294	45.0	240,866	9.3	2,585,740	100.0

The data secured in the survey show, as would be expected, that the policy of individual bargaining is followed more often in the smaller companies. Thus, 79.5 percent of the companies in which employees deal with the management only on an individual basis employ fewer than 500 wage earners, while on the other hand about 44 percent of the plants using employee representation exclusively employ more than 500. No very definite relation was apparent between size of the company and the establishment of agreements with the trade unions.

Table 2 shows the distribution of wage earners according to the different types of bargaining policy, by industry:

TABLE 2.—NUMBER AND PERCENT OF WAGE-EARNERS AFFECTED BY VARIOUS POLICIES OF CONDUCTING EMPLOYER-EMPLOYEE RELATIONS, BY INDUSTRY

Industry	Wage-earners under—							
	Individual bargaining		Employee representation		Union		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Manufacturing:								
Chemicals	64,078	61.8	38,607	37.3	948	0.9	103,633	100.0
Clothing	16,430	34.8	7,150	15.1	23,634	50.1	47,214	100.0
Food products	148,235	61.1	81,032	33.4	13,167	5.4	242,434	100.0
Leather and its products	33,610	62.7	16,407	30.6	3,606	6.7	53,623	100.0
Metal working	370,863	33.3	709,833	63.8	31,425	2.8	1,112,121	100.0
Paper and its products	52,866	55.4	37,194	39.0	5,335	5.6	95,395	100.0
Printing and publishing	11,895	52.4	5,875	25.9	4,915	21.7	22,685	100.0
Rubber products	14,610	17.8	65,288	79.6	2,171	2.6	82,069	100.0
Stone, clay, and glass products	41,821	65.3	10,003	15.6	12,228	19.1	64,052	100.0
Textiles	219,696	67.2	47,783	14.6	59,439	18.2	326,918	100.0
Wood and its products	64,683	72.3	20,494	22.9	4,342	4.9	89,519	100.0
Miscellaneous	63,762	73.1	18,439	21.1	4,982	5.7	87,183	100.0
Total	1,102,549	47.4	1,058,105	45.5	166,192	7.1	2,326,846	100.0
Extraction and refining:								
Mining, coal	2,579	3.2	5,543	7.0	71,483	89.8	79,605	100.0
Mining, metal	3,374	26.6	8,112	64.0	1,191	9.4	12,677	100.0
Petroleum	72,078	43.3	92,534	55.5	2,000	1.2	166,612	100.0
Total	78,031	30.1	106,189	41.0	74,674	28.8	258,894	100.0
Grand total	1,180,580	45.7	1,164,294	45.0	240,866	9.3	2,585,740	100.0

The report states that—

Employee representation seems to be very evenly distributed over the various industrial groups, except that this policy prevails in a large proportion of metal-mining companies and in a small proportion of concerns in the chemical group, food products, stone, clay, and glass, and coal mining. The largest proportions of employees reported by the industries as under employee representation are found in metal working, rubber products, metal mining, and petroleum refining.

Organized labor shows its greatest strength in coal mining and in the clothing industries; more than 10 percent of reporting companies deal through the unions in food products, leather and its products, and stone, clay, and glass products. The largest proportions of employees under union agreements are found in the clothing industries, printing and publishing, stone, clay and glass products, textiles, and coal mining.

A classification of the collective bargaining plans according to date of adoption shows that about 61 percent of the employee-representation plans have been introduced since the enactment of the National Industrial Recovery Act and 41.8 percent of the union agreements have been entered into since that time. It appears that, as regards both the number of companies and number of employees covered, employee representation has gained more rapidly since the Recovery Act than have union agreements, although the proportion of employees coming under each form of collective bargaining since the Recovery Act is only slightly greater for employee-representation than for union agreements. In its last study of employee-representation plans, published in the summer of 1933, the Conference Board found

a total of 432,945 workers covered by such plans and the present figure of 1,164,294 represents, therefore, a gain of 169 percent since that time.

A distribution of the employee-representation plans, by type, showed that more than one half of the plans were of the employee-committee type, about one third have joint committees, and about one tenth are a combination of the two, the employee representatives meeting sometimes by themselves and at other times with the management representatives. Since before the passage of the National Recovery Act the joint-committee type was the predominating one, it is evident that the employee-committee type has subsequently grown in favor.

EMPLOYMENT CONDITIONS AND UNEMPLOYMENT RELIEF

Work and Policies of Federal Civil Works Administration

ABOUT one sixth of the entire population of the United States was receiving public relief in March 1933, according to a statement by Harry L. Hopkins, Federal Emergency Relief Administrator. As these people were receiving only about 50 cents per day each, the result was lowered standards, undernourishment, and "a collective economic and social tragedy of the first importance." [1]

The difficulty, as Mr. Hopkins pointed out, lay in the system of relief itself, necessitating as it did an application for relief and a rigid investigation as to need which required the baring of the most intimate details of the families' economic situation.

In addition to the millions of dollars being spent in relief by local and State governments and the enormous amounts disbursed by private relief agencies, the Federal Government was advancing more than $35,000,000 per month for the same purpose.

The sum of $3,300,000,000 had been provided by Congress, to finance public works on a nation-wide scale and so provide employment. Although many projects were planned, they were slow in getting under way and even by November, more than 6 months after the passage of the law, were furnishing employment for fewer than a quarter of a million persons.

In order to speed up the employment program, the Civil Works Administration was created early in November with the purpose of providing immediately "regular work at regular wages" for able-bodied unemployed persons on work relief. This action was taken, not as a permanent policy nor to provide permanent employment, but to meet the emergency.

On November 25, 1933, at the end of the first week of operation, employment had been provided for 1,183,267 persons in 44 States and the District of Columbia,[2] and an effort was being made to provide work for some 4,000,000 persons by the end of the year. In the northern tier of States, where 130,000 had been employed on work relief, by the middle of November there were 425,000 men and women

[1] Today (New York), Dec. 16, 1933, pp. 8, et seq.: "The War on Distress", by Harry L. Hopkins.
[2] Press release No. 440 of Federal Emergency Relief Administration, Dec. 1, 1933.

working on civil-works projects. By January 18, 1934, the civil-works program was providing employment for 4,039,474 persons.[3]

The work is not to be limited to those receiving relief. Half of the jobs are to be given to persons not on relief. "This will give the opportunity of work to those who have stuck it out, who have at times, even mistakenly so, elected to suffer and see their children suffer rather than receive aid in a form that violated their self-respect and their right to earn what they receive."

The work being undertaken includes a variety of activities, such as the extension of sewer systems, building of bridges, widening of roads, cleaning out of slum areas, sanitary projects, malaria-control work, rebuilding and repairing of schoolhouses, construction of playgrounds and swimming pools, planting of trees, and traffic surveys. Other projects authorized include a farm-housing survey, production of objects of art (pictures, sculptures, etc.), renovating of buildings to be occupied by transients under Federal care, collection of statistical data (on employment, pay rolls, tax delinquency, prices of commodities purchased by farmers, etc.), archeological work, protection of water supplies, sealing of abandoned coal mines, etc.

It is evident that a departure is being made from former practices. Generally the work projects have provided occupations only of the common-labor variety and persons of all callings were put to work regardless of their skills. The new program will provide work for "white-collar" classes—teachers, clerical workers, artists, sculptors, scientists, statisticians, agricultural experts, etc.

Wage and Other Policies

It is the policy that "all persons employed on civil-works projects shall be paid just and reasonable wages, which shall be compensation sufficient to provide, for the hours of labor as limited, a standard of living in decency and comfort." Accordingly, on December 15, 1933, the Federal Civil Works Administrator issued regulations governing the rates to be paid for the various classes of work. In these regulations three zones (southern, central, and northern) are recognized. For statistical, survey, and general white-collar jobs, four rates are set: Base, intermediate, operating supervisory, and technical supervisory. The weekly base rates range from $12 in the southern zone to $18 in the northern zone, the intermediate rates from $15 to $21, the rates for operating supervisory jobs from $18 to $24 per week, and those for technical supervisory jobs from $18 to $45 per week. For construction work the rate for unskilled labor ranges from 40 to 50 cents per hour and that for skilled labor from $1 to $1.20 per hour. The rates for semiskilled labor depend on local custom but must be between the skilled and unskilled rates.

[3] For detailed data regarding employment on civil-works jobs, see p. 442 of this issue.

If the prevailing local union scale exceeds these rates, the union rate is to be paid. In case of dispute as to what is the prevailing rate, the United States Department of Labor may be called upon to decide.

The hours of labor are limited to 8 per day and 30 per week, except in the case of clerical employees who may work up to 39 hours and persons employed at remote and inaccessible places who may work up to 40 hours per week.

Labor for the projects is to be obtained from employment agencies designated by the United States Employment Service. Union members are not required to register at such employment agencies but are to be secured through the local unions of their craft.

The employment of persons under 16 and of convicts on civil-works projects is forbidden, as is also the use of any materials produced by convict labor.

A board of labor review is created to hear all issues arising in connection with the civil-works program and projects.

A distinction is made between civil-works employees and civil-works service employees. The latter include all persons employed on projects directly relating to relief offices, such as nursing, interviewing and investigating, work in sewing and canning centers, and those employed on projects such as vocational education, adult education, nursery schools, etc. The wages and other expenses incurred in connection with such service are to be met from available relief funds, and persons employed on such projects must be drawn from those eligible for relief. In order to qualify, definite need must be shown but "there shall be a minimum of individual case investigation and maximum avoidance of follow-up in the home of the individual." The prevailing wage is to be paid, but in no case less than 30 cents per hour.

Federal Grants to Self-Help Organizations of Unemployed[1]

THE years 1932 and 1933 saw the formation, in practically all sections of the United States, of groups of unemployed who banded themselves together for activities of all sorts which would enable them to be self-supporting. A survey made by the United States Bureau of Labor Statistics early in 1933 showed that while some of these groups had not been particularly successful, others had been able to supply themselves with a considerable proportion of their necessaries.

The value of such organizations was recognized by Congress by the inclusion in the Federal Emergency Relief Act of a provision authorizing the making of outright grants of Federal aid to "cooperative and self-help associations for the barter of goods and services." Almost immediately after the passage of the act several such

[1] Information supplied by Federal Emergency Relief Administration.

groups made application for grants. The first grants actually made (to three associations in California, Indiana, and Ohio) were allowed on August 29.

Up to the end of 1933, 35 grants had been made to 29 associations in 13 States. These grants totaled $263,344, of which 7 groups in California received $73,400, 6 groups in Colorado $50,692, 4 groups in Michigan $24,167, and 2 groups in Washington $15,500. In the remaining States the grants were made to one group only: Indiana, $7,000; Louisiana, $2,000; Minnesota, $20,000; Nebraska, $2,000; Ohio, $30,000; Pennsylvania, $5,500; Utah, $10,000; Virginia, $15,485, and West Virginia, $6,000.[2]

The groups thus aided had, at the time the grants were made, a combined membership of nearly 60,000. In a number of cases additional persons were registered with the self-help organizations who, it was expected, could be taken into membership with the aid of the Federal grant.

The Federal Emergency Relief Administration points out that rising prices and improving markets have brought with them a new problem for these cooperative groups. The most substantial contribution to the support of their members was in most cases that of vegetables and fruits obtained from neighboring farmers by the exchange of the members' labor therefor. In Los Angeles County probably 90 percent of the income earned by the 130 self-help units came from this source, as the farmers were glad to get their farm work done in exchange for produce they could not sell. With improved markets, however, their attitude has changed and the groups are finding it increasingly difficult to continue their farming contacts.

Although some organizations are working farm land on their own account, the chief means by which they propose to solve this problem is to produce goods of various kinds for their own use, using any surplus they may have for trading purposes. The Federal Emergency Relief Administration states that recent applications for grants have contained more requests for light industrial equipment and fewer for transportation equipment and supplies than did the earlier ones. In this connection the Federal office states:

> Productive activities do not multiply the effectiveness of the "relief dollar" as many times as the services-for-goods method, and yet sustenance is provided more cheaply in this fashion than by any other relief technique. Before Federal aid became available, a conservative estimate of the total relief saving effected by associations now on grants is in the neighborhood of $1,800,000.

The productive activities are looked upon by the older members of the groups as a possible source of permanent occupation. These men feel that they will never again be able to gain a foothold in industrial

[2] Early in January 1934 a grant of $13,733 was made to the Unemployed Cooperative Relief Association at Compton, Calif.; this organization was the first self-help association formed in California.

employment, and are therefore anxious to develop new sources of livelihood which the group industries seem to offer.

The importance of these organizations as a medium, also, of vocational adjustments and adult education is pointed out. Thus in some cases the members are acquiring new skills. In one group carpenters are learning cabinetwork, in another ex-miners are learning how to make craft furniture in fine woods. The case is cited of a former "handy man" in one group who through group activities discovered he had a genius for trading. He began operations with $100 in cash, contributed by an interested business man. After 6 weeks' trading, he had 3 cows, a sow, several sheep, and $150 in cash, as well as the original $100 capital.

The greatest contribution made by these groups, it is felt, lies in their having sustained and raised the morale of the unemployed participating in the self-help activities. Their members are proud of the organizations they have built up and are reported as being reluctant to leave them even for cash jobs.

The Federal Relief Administrator has set up a staff to assist organized unemployed cooperative groups who receive or apply for Federal grants, to help them to improve their methods of production, accounting, and management.

Grants Made Under Relief Act

THE table following shows the individual grants since the passage of the Federal Emergency Relief Act in the spring of 1933.

GRANTS TO SELF-HELP ORGANIZATIONS OF UNEMPLOYED, MADE UNDER FEDERAL EMERGENCY RELIEF ACT DURING 1933

State and organization for which grant was made	Date of grant	Amount of grant	Active membership of group
California:			
State Relief Administration	Aug. 16	$10,000	----------
Los Angeles County Unemployed Cooperative Relief Association, Los Angeles	Aug. 29	30,000	35,903
	Dec. 18	15,000	
Unemployed Exchange Association, Oakland	Oct. 23	5,000	450
Pacific Cooperative League, Berkeley	do	3,925	355
Atascadero Trading Association	do	2,775	373
South Gate Relief Center, South Gate	Nov. 22	2,400	450
Cooperative Distribution Committee, Orange City	Dec. 28	1,300	[1]
Monterey Unemployed Relief Council	Nov. 22	3,000	[2] 226
Colorado:			
Denver Recovery Exchange, Grace Church Relief Association (Denver), Highland Group of Unemployed (Denver), and Citizens' League (Boulder)	Oct. 17	1,000	----------
Harmon Cooperative Association, Denver	Dec. 26	3,567	65
Citizens' League of Boulder	do	20,300	100
Denver Recovery Exchange	do	9,975	71
South Denver Cooperative Industries	do	7,500	99
Grace Center Cooperative Association, Denver	do	5,000	85
Highland Group of Unemployed, Denver	do	3,350	175
Indiana:			
Allen County Scrip and Barter Association, Fort Wayne	Aug. 29	7,000	260
Louisiana:			
East Baton Rouge Employment Exchange	Oct. 23	3,600	378

[1] Not reported.
[2] Families.

GRANTS TO SELF-HELP ORGANIZATIONS OF UNEMPLOYED, MADE UNDER FEDERAL EMERGENCY RELIEF ACT DURING 1933—Continued

State and organization for which grant was made	Date of grant	Amount of grant	Active membership of group
Michigan:			
Community Cooperative Industries, Lansing	Sept. 11	$6,500	[1] 350–380
	Oct. 23	1,050	
	Dec. 9	9,500	
Grand Rapids Emergency Exchange Association	Oct. 23	4,350	[1] 118
Alma Cooperative Exchange	Dec. 13	750	75
Barter and Trade, Kalamazoo	Dec. 18	2,017	800
Minnesota:			
Organized Unemployed, Minneapolis	Dec. 11	20,000	756
Nebraska:			
Self-Help Movement of Grand Island	Oct. 23	2,000	118
Ohio:			
Cooperative Production Units, Dayton	Aug. 29	5,000	[1] 400
	Oct. 17	25,000	
Pennsylvania:			
Barter Association, Philadelphia	Aug. 11	5,500	480
Utah:			
Natural Development Association, Salt Lake City	Oct. 23	10,000	2,000
Virginia:			
Citizens Service Exchange, Richmond	Sept. 14	2,000	546
	Dec. 18	13,485	
Washington:			
United Producers of Snohomish, Everett	Oct. 23	13,000	200
State Emergency Relief Administration, Olympia	Nov. 23	2,500	----------
West Virginia:			
Mountaineer Craftsmen's Cooperative Association, Morgantown	do	6,000	68

[1] Families.

Purposes of loans.—Under the regulations the grants can be made only for "productive purposes." The productive purposes include a variety of projects. Nearly three fourths of the grants included money for transportation (gasoline, oil, service, and repair of trucks, etc., or purchase of trucks). As was pointed out in a study made by the Bureau of Labor Statistics early in 1933,[3] the problem of securing the wherewithal to keep the trucks moving in the hauling of vegetables and other commodities purchased by the labor of the members has been a most difficult one, as it is seldom that a sufficient supply of gasoline can be obtained without the cash, which, of course, these groups have lacked. Equipment and tools for various productive enterprises were requested in almost every application for Federal funds, including (in order of number of requests) canning operations, shoe repair, operation of wood or lumber camp or yard, clothing manufacture, manufacture of bakery goods, house repair, garage operation, laundry operation, house wrecking, coal-mine operation, working over of gold-mine dump; manufacture of cloth, shoes, leather, lumber, shingles, furniture, and soap; and operation of a stone quarry and of a poultry farm.

Activities Carried on by Groups Aided

THE activities engaged in by the groups aided thus far include landscape gardening, farm labor on shares, dairying, butchering, raising of poultry and rabbits, canning of fruits and vegetables, plumbing,

[3] See Monthly Labor Review, issues of March to June 1933.

grinding of grains, logging, carpentry, house-repair work, house wrecking, art work, dentistry, printing; making of bakery goods, brooms, bedding, box shook, crates, cider, cloth, clothing, furniture (also upholstery), maple sirup, pickles, soap, hand-made rugs, and rubber mats (from automobile tires); repair of clothing, furniture, radios, shoes, and stoves; and operation of store, commissary, cafeteria, beauty shop, barber shop, blacksmith shop, coal mine, foundry, garage, laundry, sawmill, and wood yard.

One association in Pennsylvania has operated two farms, aggregating 210 acres, of which 175 were cultivated; it is estimated that the value of the crops so obtained was about $6,000. A Middle West organization has been operating a 33-acre farm which it had to irrigate. The use of the land was obtained in exchange for the planting of 200 trees. This group has also raised garden stuff on 125 city lots.

An association in a mining region is concentrating its efforts on the development of handicraft industries, training its members, ex-miners, in cabinetwork and furniture manufacture. Its membership includes 26 former miners who have learned chair making and more than half of whom are now good cabinetmakers as well; 8 women who weave small rugs and runners on hand looms; and 10 women who do fancy sewing and embroidery.

The provision of living quarters for the members is a knotty problem with which only a few associations have had any degree of success. Several groups have been able to obtain housing for a small number of their people by renovating run-down houses in return for a lease on the premises. In other cases the members have been able to exchange labor or scrip for rent.

Results of Group Effort as Regards Employment and Relief Costs

One association at the time of receiving the Federal grant was supporting 9 persons entirely and expected to give temporary employment to 100 others in its canning operations. A second organization, consisting of 360 families, has been able to support itself partially, and to give assistance to 3,000 others during the first year of operation. Another association has by its activities removed 65 families from the county relief rolls. A southern group is maintaining through cooperative effort 378 persons who would otherwise have been a charge on the public. It has concentrated on assisting families not receiving relief rather than those who are on relief, on the ground that assistance is needed more by the former class. This organization is reported as "finding work in unusual jobs or occupations, so there is no competition, for 40 to 50 individuals a day who would do no work otherwise."

A Middle West association has enabled 118 families, which would otherwise have to resort to public aid, to be self-supporting. Another in the same section of the country, whose numbers fluctuate around

350, by its cooperative activities was responsible for the removal of 94 families from the public relief rolls in August 1933 and 63 more the following month; but for the employment furnished by group enterprises, from 60 to 75 percent of the membership would be unable to support themselves. A far-west organization of 355 includes in its membership about 100 who would otherwise be forced to ask public help.

In several other cases a considerable proportion of the membership is receiving a certain amount of relief which the group supplements through its activities.

Most of the groups find entire self-support difficult if not impossible. One far-western association, however, has been entirely self-sustaining since its formation in August 1932. The activities of this group include the gathering, drying, and canning of fruits and vegetables, repair and servicing of trucks and automobiles for doctors and dentists in return for medical and dental service, rebuilding of cars, reconditioning of tires, shoe repair, construction and carpentry, foundry work, art work, landscape gardening, soap making, weaving of cloth, and making of clothing. This group is recognized as having been "of definite constructive benefit to the community by making members self-sustaining and preventing them from ever getting on relief rolls in the first place. Besides the provision of food, clothing, and shelter, the necessity of education to a new way of living and general rehabilitation of individuals is recognized and has a place in their program."

Of another association in the same region it is said that the "ingenuity shown in securing projects has helped to make the system self-sustaining to a surprising degree."

One of the largest associations receiving a Federal grant is reported to have saved the State the sum of $150,000 in work relief during the 2 years it has been in operation. Another, farther west, is estimated to have saved the taxpayers about $5,000 a month or $90,000 in the 18 months it has been operating. Of a third, not far away, it is reported that, "most members have had to seek aid through conventional channels, but reduction in relief cost can be estimated at $20,000 for first 6 months of 1933." A Middle West group is reported to have reduced relief costs $11,392, and two others (in the Mountain States) by $1,000 and $1,250 a month. The largest organization of all has since its formation saved the county and the State an estimated amount of $300,000 in relief costs; during the month of September 15–October 15, 1933, the saving in direct relief was stated to be $85,985.

A comparatively small number of the associations are reported as using scrip, and, of these, only in three instances has the scrip depreciated. In one case it is stated that there is "no depreciation; has in fact increased in value."

HEALTH AND INDUSTRIAL HYGIENE

Health of Workers in Dusty Trades

GRANITE cutters showed by far the highest disability rate, especially for pulmonary tuberculosis, in studies of the effects of dusts in six dusty trades. Respiratory disease rates were relatively high for anthracite-coal miners and for employees of the Portland cement plant studied. The 8-day and longer respiratory disease rates were not much above the average for male industrial workers generally in the studies of other types of dust; that is, soft-coal mining, a textile plant, silverware manufacturing, and street cleaning.

The above facts are shown in a series of six studies on the effects of specific types of dust on the health of workers recently completed by the United States Public Health Service. The dusts covered in the studies include cement dust, siliceous dust in the granite-cutting industry, carbon dust in the anthracite and bituminous-coal industries, vegetable dust in cotton-cloth manufacturing, dusts from silverware manufacturing processes, and municipal dust to which street cleaners are exposed. The results of these studies are briefly summarized in a recent issue [1] of Public Health Reports.

In the studies physical examinations and X-rays were made of groups of workers who were observed over a considerable period of time in order to determine the character and severity of sickness they experienced so that the illnesses could be correlated with occupational environment. The dust determinations were of a uniform character so that it was possible to obtain a fairly accurate estimate of the dustiness of the occupation, the upper and lower limits, and the changes which might take place especially at different seasons of the year. Sickness records were kept for each person in a group, and workers who showed any evidence of lung pathology were placed in a special group for further examination. In most of these special cases X-rays were made of the chests and sputum examinations were made where necessary.

The frequency of cases of respiratory disease causing disability for more than 1 week was used as an index of the effect of dust exposure, as it placed the emphasis upon the more serious disabilities and facilitated comparison with other industrial groups.

[1] United States Public Health Service. Public Health Reports, Nov. 17, 1933. The health of workers in dusty trades, p. 1398.

The nature of the respiratory diseases differed among persons exposed to different types of dust. Thus, in granite-cutting plants the rate for pulmonary tuberculosis was very high, in the hard-coal group the rates were highest for influenza and bronchitis, and there was an unusual frequency of influenza among employees of the cement plant, in spite of the fact that there was no epidemic of consequence during the periods in which records were kept.

An association between the amount and character of dust in the working atmosphere and the health of the workers was shown by the physical examinations and the X-ray findings. Serious physical impairment was found where the workers were exposed for long periods to large amounts of dust containing a high percentage of quartz. In industries where the dust concentration and quartz percentage were relatively low only a mild fibrosis was found which in most cases could not be regarded as due to the particular dust.

The following table gives estimates of the degree of the dust hazard in the different studies.

SUMMARY OF DEGREE OF DUST HAZARD AS SHOWN IN SIX STUDIES BY THE UNITED STATES PUBLIC HEALTH SERVICE

Study	Average dust count in millions of particles per cubic foot of air	Average percentage of free silica (quartz)	Other characteristics of dust	Degree of hazard (under conditions as observed in each study)
Granite cutting:				
(a) Hand pneumatic operators.	59	35	Remainder mostly combined with silica.	Great excess of pulmonary tuberculosis after 15 years or more exposure; silicosis in from 2 to 10 years.
(b) Surface-machine operators, etc.	36			Silicosis after prolonged exposure; no excess of tuberculosis.
(c) General air	20			
(d) Less than general air.	9			Negative except for occasional nondisabling silicosis.
Anthracite coal:				
Rock drillers	82	31	Siliceous rock	Data insufficient; other studies show severe hazard.
Miners and miners' helpers.	232	1.5	Carbon and inorganic matter.	Dyspnea and other signs of pneumoconiosis; excess sickness from respiratory conditions; excess mortality from influenza, pneumonia and possibly tuberculosis.
Bituminous coal:				
Rock drillers	78	54	Sandstone	Data insufficient; other studies indicate severe hazard.
Loaders and machine men.	112	1.2	Carbon	Generalized fibrosis chiefly linear in character; excess mortality from influenza and pneumonia.
Cement	26	6-8	Primarily lime	Some early pneumoconiosis; excess of diseases of upper respiratory tract and of influenza.
Cotton-cloth manufacturing.	7	.....	Vegetable and silica.	Negative.
Silverware manufacturing	5	1.7	Metal and other	Do.
Municipal	4	.....	Not determined	Do.

Miners' Phthisis in South Africa

AN IMPROVEMENT has been shown in recent years in the number of compensable cases of miners' phthisis (silicosis) reported among both European miners and native laborers, according to the report [1] of the South African Department of Mines and Industries for 1932.

The following table shows the number of new cases of silicosis, tuberculosis with silicosis, and tuberculosis among European miners, which were detected at periodical examinations for the years 1926–27 to 1931–32:

TABLE 1.—NEW CASES OF SILICOSIS, TUBERCULOSIS WITH SILICOSIS, AND TUBERCULOSIS, AMONG EUROPEAN MINERS IN SOUTH AFRICA FROM 1926–27 TO 1931–32

Year	Number of cases			Total	Year	Number of cases			Total
	Silicosis	Tuberculosis with silicosis	Tuberculosis			Silicosis	Tuberculosis with silicosis	Tuberculosis	
1926–27	364	2	42	408	1930–31	227	4	31	262
1927–28	283		32	315	1931–32	208	7	21	236
1928–29	270	5	44	319					
1929–30	256	2	33	291	Total	1,608	20	203	1,831

Routine physical examinations of native laborers (Eurafrican and Asiatic) have been made since October 1929. Since that period 1,544 laborers have been examined, 16 cases of silicosis and 12 cases of tuberculosis being found, but no cases of tuberculosis with silicosis.

The following table shows the number of cases of compensable disease among native laborers in South Africa for the past 13 years:

TABLE 2.—NUMBER OF COMPENSABLE CASES OF SILICOSIS, TUBERCULOSIS WITH SILICOSIS, AND TUBERCULOSIS DETECTED AMONG NATIVE LABORERS IN THE SOUTH AFRICAN GOLD FIELDS, 1919–20 TO 1931–32

Year	Number of cases			Total	Year	Number of cases			Total
	Silicosis	Tuberculosis with silicosis	Tuberculosis			Silicosis	Tuberculosis with silicosis	Tuberculosis	
1919–20	125	389	791	1,305	1926–27	238	409	787	1,434
1920–21	128	274	807	1,209	1927–28	209	397	746	1,352
1921–22	40	202	576	818	1928–29	208	426	602	1,236
1922–23	71	319	660	1,050	1929–30	235	312	672	1,219
1923–24	114	310	581	1,005	1930–31	420	270	680	1,370
1924–25	85	359	456	900	1931–32	268	171	620	1,059
1925–26	201	434	561	1,196					

[1] Union of South Africa. Department of Mines and Industries. Annual report of the Government Mining Engineer for 1932. Pretoria, 1933, pp. 82–90.

LABOR LAWS AND COURT DECISIONS

Minnesota Emergency Law Upheld by United States Supreme Court

IN AN opinion based upon prior decisions which, according to the court, showed a "growing appreciation of public needs and of the necessity of finding ground for a rational compromise between individual rights and public welfare", the United States Supreme Court upheld emergency legislative powers and declared valid the Minnesota mortgage moratorium law of 1933 (*Home Building & Loan Association* v. *Blaisdell et al.*, 54 Sup. Ct. 231).

Whether or not the economic emergency justifies the enactment of certain recent legislation is a question which has been debated by many outstanding authorities for several months, and the opinion of the Supreme Court is welcomed to throw light on the problem.

The facts in the case involve the mortgage-moratorium law enacted by the State of Minnesota in 1933. This law provides that the district courts of the State may extend the period of redemption from mortgage foreclosure sales for such length of time as the court deems equitable, "but in no event beyond May 1, 1935." The law also provides that if such an extension is ordered by the court, it shall determine the reasonable value of the income from the property and the court may order the mortgagor to pay "all or a reasonable part of such income or rental value, in or toward the payment of taxes, insurance, interest, mortgage, or judgment indebtedness."

In 1928 the Home Building & Loan Association made a loan to one Blaisdell in the sum of $3,701, and as security a mortgage on Blaisdell's home was given which contained the usual provisions authorizing sale in case of default. The mortgagee foreclosed on the property following a default by the mortgagor. The property was sold on May 2, 1932, to the mortgagee, for the amount of the mortgage. Under the Minnesota law Blaisdell had the right to redeem the property during the year ending May 2, 1933. On April 18, 1933, the moratorium law was enacted and Blaisdell petitioned the district court for an extension of the period of redemption under this new law. A decree was issued extending the period of redemption until May 1, 1935, and providing for the monthly payment of a certain sum by the mortgagor during the extended period. The decision was appealed to the Minnesota Supreme Court, which held the law valid and declared that the impairment of the contract was necessary to afford the relief desired (249 N.W. 893). Appeal was thereupon taken to

the United States Supreme Court. The counsel for the mortgagee contended that the law was unconstitutional because it impaired the rights under the contract, deprived appellant of its property without due process of law, and denied equal protection of the laws.

In defending the statute, counsel pointed to the fact that "a great economic emergency has arisen in which the State has been compelled to invoke the police power to protect its people in the possession and ownership of their homes and farms and other real estate from the disastrous effects of the wholesale foreclosure of real estate mortgages which inevitably resulted from the present State-wide, Nation-wide, world-wide economic depression."

In rendering the majority opinion, Mr. Chief Justice Hughes reviewed the major provisions of the law and found that in determining whether the provisions of the law exceed the power of the State by reason of the clause in the Federal Constitution prohibiting impairment of the obligations of contracts, the Court must "consider the relation of emergency to constitutional power, the historical setting of the contract clause", and the development of the principles of construction which we may consider to be established by the Court in the construction of that clause.

In referring to the economic emergency as a basis for the legislation the Court quoted from Mr. Justice Olsen of the State court as follows:

> The present Nation-wide and world-wide business and financial crisis has the same results as if it were caused by flood, earthquake, or disturbance in nature. It has deprived millions of persons in this Nation of their employment and means of earning a living for themselves and their families; it has destroyed the value of and the income from all property on which thousands of people depended for a living; it actually has resulted in the loss of their homes by a number of our people and threatens to result in the loss of their homes by many other people in this State; it has resulted in such widespread want and suffering among our people that private, State, and municipal agencies are unable to adequately relieve the want and suffering and Congress has found it necessary to step in and attempt to remedy the situation by Federal aid. Millions of the people's money were and are yet tied up in closed banks and in business enterprises.

The Supreme Court then discussed the question as to whether there had been a change in the rights of the parties because of the enactment of the law. It found:

> The statute does not impair the integrity of the mortgage indebtedness. The obligation for interest remains. The statute does not affect the validity of the sale or the right of a mortgagee-purchaser to title in fee, or his right to obtain a deficiency judgment, if the mortgagor fails to redeem within the prescribed period. Aside from the extension of time, the other conditions of redemption are unaltered. While the mortgagor remains in possession he must pay the rental value as that value has been determined, upon notice and hearing, by the court. The rental value so paid is devoted to the carrying of the property by the application of the required payments to taxes, insurance, and interest on the mortgage indebtedness. While the mortgagee-purchaser is debarred from actual possession, he has, so far as rental value is concerned, the equivalent of possession during the extended period.

"While emergency does not create power", said the Court, "emergency may furnish the occasion for the exercise of power." The Court restated the rule established in *Wilson* v. *New* (243 U.S. 332) in which the Court said: "Although an emergency may not call into life a power which has never lived, nevertheless emergency may afford a reason for the exertion of a living power already enjoyed." Continuing the Court said:

> The constitutional question presented in the light of an emergency is whether the power possessed embraces the particular exercise of it in response to particular conditions. Thus, the war power of the Federal Government is not created by the emergency of war, but it is a power given to meet that emergency. It is a power to wage war successfully, and thus it permits the harnessing of the entire energies of the people in a supreme cooperative effort to preserve the Nation.

In the construction of the contract clause the court found the debates in the Constitutional Convention of little assistance, but resorted to prior decisions to determine the full intent and meaning of the clause. In *Sturges* v. *Crowninshield* (4 Wheat. 122), Mr. Chief Justice Marshall said: "The distinction between the obligation of a contract, and the remedy given by the legislature to enforce that obligation, has been taken at the bar, and exists in the nature of things. Without impairing the obligation of the contract, the remedy may certainly be modified as the wisdom of the Nation shall direct." In *Penniman's case* (103 U.S. 714) the court said: "The general doctrine of this court on this subject may be thus stated: In modes of proceeding and forms to enforce the contract the legislature has the control, and may enlarge, limit, or alter them, provided it does not deny a remedy or so embarrass it with conditions or restrictions as seriously to impair the value of the right." The court also called attention to the decision in *Stephenson* v. *Binford* (287 U.S. 251) in which the court had pointed out that "the policy of protecting contracts against impairment presupposes the maintenance of a government by virtue of which contractual relations are worth while—a government which retains adequate authority to secure the peace and good order of society."

In upholding the Minnesota law, reliance was placed upon the decisions upholding a statute establishing reasonable rates for electricity; a statute prohibiting injurious practices in business; and statutes regulating the renting of houses during an emergency period of scarcity of housing facilities.

In arguing against a narrow interpretation of the Constitution, Mr. Chief Justice Hughes again quoted Mr. Chief Justice Marshall, who, in *McCulloch* v. *Maryland* (4 Wheat. 316) uttered the memorable warning, "We must never forget that it is a constitution we are expounding—a constitution intended to endure for ages to come, and consequently, to be adapted to the various crises of human affairs."

In summing up the findings of the Court Mr. Chief Justice Hughes concluded:

1. An emergency existed in Minnesota which furnished a proper occasion for the exercise of the reserve power of the State to protect the vital interests of the community. * * *

2. The legislation was addressed to a legitimate end; * * *

3. In view of the nature of the contracts in question—mortgages of unquestionable validity—the relief afforded and justified by the emergency, in order not to contravene the constitutional provision, could only be of a character appropriate to that emergency and could be granted only upon reasonable conditions.

4. The conditions upon which the period of redemption is extended do not appear to be unreasonable. * * *

5. The legislation is temporary in operation. It is limited to the exigency which called it forth. * * *

We are of the opinion that the Minnesota statute as here applied does not violate the contract clause of the Federal Constitution. Whether the legislation is wise or unwise as a matter of policy is a question with which we are not concerned.

What has been said on that point is also applicable to the contention presented under the due process clause.

Nor do we think that the statute denies to the appellant the equal protection of the laws. The classification which the statute makes cannot be said to be an arbitrary one.

Mr. Justice Sutherland rendered a dissenting opinion concurred in by Justices Van Devanter, McReynolds, and Butler. The dissent expressed the views that the decision rendered in *Ex parte Milligan* (4 Wall. 2), "in the face of circumstances of national peril and public unrest and disturbance far greater than any that exist today," should be declared as the rule to be followed today. Referring to that case the dissenting justice said:

In that great case this Court said that the provisions of the Constitution there under consideration had been expressed by our ancestors in such plain English words that it would seem the ingenuity of man could not evade them, but that after the lapse of more than 70 years they were sought to be avoided. "Those great and good men", the Court said, "foresaw that troublous times would arise, when rulers and people would become restive under restraint, and seek by sharp and decisive measures to accomplish ends deemed just and proper; and that the principles of constitutional liberty would be in peril, unless established by irrepealable law. The history of the world had taught them that what was done in the past might be attempted in the future." And then, in words the power and truth of which have become increasingly evident with the lapse of time, there was laid down the rule without which the Constitution would cease to be the "supreme law of the land", binding equally upon governments and governed at all times and under all circumstances, and become a mere collection of political maxims to be adhered to or disregarded according to the prevailing sentiment or the legislative and judicial opinion in respect of the supposed necessities of the hour:

"The Constitution of the United States is a law for rulers and people, equally in war and in peace, and covers with the shield of its protection all classes of men, at all times, and under all circumstances. No doctrine, involving more pernicious consequences, was ever invented by the wit of man than that any of its provisions can be suspended during any of the great exigencies of government. Such a doctrine leads directly to anarchy or despotism, * * *."

INDUSTRIAL DISPUTES

Strikes and Lockouts in the United States in December 1933

DATA regarding industrial disputes in the United States for December 1933 with comparable data for preceding months are presented below. Disputes involving fewer than six workers and lasting less than one day have been omitted.

Table 1 shows the number of disputes beginning in each year from 1927 to 1932, the number of workers involved and man-days lost for these years and for each of the months, January 1932 to December 1933, inclusive, as well as the number of disputes in effect at the end of each month and the number of workers involved. The number of man-days lost, as given in the last column of the table, refers to the estimated number of working days lost by workers involved in disputes which were in progress during the month or year specified.

TABLE 1.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH, JANUARY 1932 TO DECEMBER 1933, AND TOTAL NUMBER OF DISPUTES, WORKERS, AND MAN-DAYS LOST IN THE YEARS, 1927 TO 1932

Month and year	Number of disputes		Number of workers involved in disputes		Number of man-days lost in disputes existing in month or year
	Beginning in month or year	In effect at end of month	Beginning in month or year	In effect at end of month	
1927	734	----------	349,434	----------	37,799,394
1928	629	----------	357,145	----------	31,556,947
1929	903	----------	230,463	----------	9,975,213
1930	653	----------	158,114	----------	2,730,368
1931	894	----------	279,299	----------	6,386,183
1932	808	----------	242,826	----------	6,462,973
1932					
January	87	37	12,091	4,993	132,873
February	56	34	33,713	31,103	460,701
March	64	30	33,087	13,937	736,782
April	89	44	19,187	21,513	620,866
May	87	52	44,357	49,777	1,251,455
June	69	46	15,858	24,138	943,338
July	66	40	20,890	33,216	740,785
August	85	38	28,492	27,717	754,423
September	85	33	17,824	7,456	566,045
October	47	23	10,442	2,324	147,059
November	38	21	3,460	1,896	68,154
December	35	12	3,425	997	40,492
1933					
January	67	29	19,616	8,790	240,912
February	63	32	16,909	6,706	109,860
March	91	41	39,913	12,794	445,771
April	72	46	23,077	19,867	535,039
May	133	49	41,652	16,584	603,723
June	131	45	40,903	24,593	504,362
July	219	68	108,350	49,058	1,404,850
August	198	73	145,635	101,041	1,401,532
September	180	92	235,071	156,210	3,642,431
October	107	67	51,668	94,368	3,067,967
November [1]	56	45	38,875	23,277	1,193,188
December [1]	41	40	26,924	14,706	441,807

[1] Preliminary figures subject to change.

Table 2 shows in detail by city, State, and industry the number of strikes in December 1933, the number of workers involved and the man-days lost.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF DECEMBER 1933, AND MAN-DAYS LOST, BY CITY AND INDUSTRY

Industry or occupation and city	Number of disputes		Number of workers involved in disputes		Number of man-days lost in December
	Beginning in December	In effect at end of December	Beginning in December	In effect at end of December	
Auto, carriage, and wagon workers:					
New Jersey: Edgewater		1		400	8,000
Pennsylvania:					
Chester		1		200	4,000
Philadelphia					[1] 8,400
Total		2		600	20,400
Bakers:					
Missouri: Springfield	1	1	43	43	817
New York:					
Brooklyn					[1] 1,250
New York City		1		1,200	30,000
Ohio:					
Toledo					[1] 126
Do	1		17		34
Pennsylvania: Reading	1	1	45	45	810
Total	3	3	105	1,288	33,037
Building trades:					
New York: New York City					[1] 42
Pennsylvania: Pittsburgh		1		200	5,000
Total		1		200	5,042
Chauffeurs and teamsters:					
Michigan: Detroit	1		100		300
New Jersey: Newark	1		40		120
New York: New York City	1	1	800	800	18,400
Ohio: Canton	1		144		576
Pennsylvania:					
Philadelphia					[1] 987
Do		1		900	27,900
Do	3	1	12,800	2,500	38,100
Pittsburgh	1		212		848
Total	8	3	14,096	4,200	87,231
Clerks and salesmen:					
New York: New York City	1	1	18	18	360
Pennsylvania: Philadelphia	2	2	450	450	6,400
Total	3	3	468	468	6,760
Clothing trades:					
California: Los Angeles	1		1,000		1,000
Iowa: Clinton					[1] 748
Massachusetts: Stoughton					[1] 334
Missouri: St. Louis	1	1	615	615	7,995
Total	2	1	1,615	615	10,077
Food workers:					
Florida: Lake Wales	1	1	1,500	1,500	24,000
Illinois: Chicago	1		1,400		21,000
Total	2	1	2,900	1,500	45,000
Furniture workers:					
Ohio: Dayton		1		26	650
Hotel and restaurant workers:					
New Jersey: Lakewood	1	1	40	40	440
New York: New York City	1		39		312
Total	2	1	79	40	752

[1] I.e., in strikes which began prior to December and continued into December but were not in effect at the end of the month.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF DECEMBER 1933, AND MAN-DAYS LOST, BY CITY AND INDUSTRY—Continued

Industry or occupation and city	Number of disputes		Number of workers involved in disputes		Number of man-days lost in December
	Beginning in December	In effect at end of December	Beginning in December	In effect at end of December	
Iron and steel workers:					
Illinois: Alton	1	1	250	250	2,750
Ohio: Dover	1		1,000		7,000
Total	2	1	1,250	250	9,750
Jewelry workers:					
New Jersey: Newark		1		600	15,000
Laundry workers:					
Illinois: Chicago	1		27		27
Leather workers:					
Massachusetts: Norwood					[1] 2,600
Longshoremen, freight handlers:					
Louisiana: New Orleans	1	1	75	75	525
Metal trades:					
Connecticut:					
Hamden					[1] 208
Hartford	1	1	185	185	3,700
Stratford					[1] 528
Georgia: Atlanta	1		21		294
Illinois:					
Canton		1		8	200
Chicago	1		143		715
New Jersey: Bayonne					[1] 4,000
New York:					
Brooklyn					[1] 2,280
Brooklyn	1	1	70	70	1,400
Total	4	3	419	263	13,325
Miners:					
Alabama: Nauvoo	1		175		700
Pennsylvania:					
Coaldale, Tamaqua	1		2,650		37,100
Plymouth					[1] 3,750
Total	2		2,825		41,550
Motion-picture operators and theatrical workers:					
Missouri: St. Louis		1		10	310
Oil and chemical workers:					
Pennsylvania: Langeloth	1	1	427	427	8,540
Slaughtering and meat-packing workers:					
Illinois: Chicago					[1] 276
Minnesota: South St. Paul		1		300	[1] 7,500
Total		1		300	7,776
Municipal employees:					
Illinois:					
Du Page County	1	1	1,000	1,000	19,000
Taylorville					[1] 150
Total	1	1	1,000	1,000	19,150
Teachers:					
Pennsylvania: Pittston township	1	1	30	30	360
Textiles:					
Alabama:					
Blue Mountain					[1] 1,440
Jacksonville		1		350	8,750
Georgia: Rome					[1] 1,086
Maine: Westbrook	1		50		100
Minnesota: Minneapolis		1		100	2,500
Mississippi:					
McComb					[1] 200
Do	1	1	200	200	2,200
New Jersey:					
Paterson					[1] 20,315
Do	1	1	70	70	560
North Carolina: Asheboro					[1] 1,600

[1] I.e., in strikes which began prior to December and continued into December but were not in effect at the end of the month.

TABLE 2.—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF DECEMBER 1933, AND MAN-DAYS LOST, BY CITY AND INDUSTRY—Continued

Industry or occupation and city	Number of disputes		Number of workers involved in disputes		Number of man-days lost in December
	Beginning in December	In effect at end of December	Beginning in December	In effect at end of December	
Textiles—Continued.					
Pennsylvania:					
Easton		1		75	1,875
Laureldale		1		759	18,975
Northampton	1	1	100	100	1,000
Reading	1	1	200	200	1,400
Scranton	1		340		3,060
Rhode Island:					
Central Falls and Pawtucket					[1] 22,000
Pawtucket		1		22	440
South Carolina:					
Bennettsville					[1] 396
Clearwater					[1] 96
Langley and Bath					[1] 355
Tennessee: Knoxville		1		200	5,000
Total	6	10	960	2,076	93,348
Tobacco workers:					
Pennsylvania, Nanticoke	1	1	614	614	14,122
Other occupations:					
Molders:					
Ohio: Dayton					[1] 234
Paint workers:					
Pennsylvania: Philadelphia					[1] 2,750
Rubber products:					
Pennsylvania: Philadelphia	1	1	34	34	782
Tin-can workers:					
Pennsylvania: Philadelphia					[1] 459
Wooden-box workers:					
Washington: Raymond		1		90	2,250
Total	1	2	34	124	6,475
Grand total	41	40	26,924	14,706	441,807

[1] I.e., in strikes which began prior to December and continued into December but were not in effect at the end of the month.

Occurrence of Disputes

TABLE 3 gives, by industrial groups, the number of strikes beginning in October, November, and December 1933, and the number of workers directly involved.

TABLE 3.—INDUSTRIAL DISPUTES BEGINNING IN OCTOBER, NOVEMBER, AND DECEMBER 1933

Industrial group	Number of disputes beginning in—			Number of workers involved in disputes beginning in—		
	October	November	December	October	November	December
Auto, carriage, and wagon workers		2			698	
Bakers	2	4	3	5,315	1,718	105
Brewery and soft-drink workers	1			40		
Building trades	6	2		605	207	
Chauffeurs and teamsters	5	3	8	4,835	1,071	14,096
Clerks and salesmen			3			468
Clothing workers	13	3	2	9,133	251	1,615
Electric and gas appliance workers	2			300		
Farm labor	2			2,550		
Food workers	3	1	2	210	7	2,900
Furniture workers	4	1		441	26	
Hotel and restaurant workers			2			79
Iron and steel workers			2			1,250
Jewelry workers	1	1		3,050	600	
Laundry workers	1		1	90		27
Leather workers	6	1		2,526	650	
Light, heat, power, and water workers	1			300		
Longshoremen	2	1	1	300	1,500	75
Metal trades	7	3	4	490	119	419
Miners	13	6	2	5,471	21,862	2,825
Motion-picture operators and theatrical workers		2			28	
Oil and chemical workers			1			427
Paper and paper goods workers	1			550		
Printing and publishing workers	1			37		
Rubber workers	2	1		1,736	37	
Shipbuilding workers	1			3,500		
Slaughtering and meat-packing employees	1	8		93	5,088	
Municipal workers	1	2	1	100	213	1,000
Teachers	1		1	112		30
Textile workers	18	10	6	5,753	2,363	960
Tobacco workers			1			614
Other occupations	12	5	1	4,131	2,437	34
Total	107	56	41	51,668	38,875	26,924

Size and Duration of Disputes

TABLE 4 gives the number of industrial disputes beginning in December 1933, classified by number of workers and by industrial groups.

TABLE 4.—NUMBER OF INDUSTRIAL DISPUTES BEGINNING IN DECEMBER 1933, CLASSIFIED BY NUMBER OF WORKERS AND BY INDUSTRIAL GROUP

Industrial group	Number of disputes beginning in December 1933 involving—					
	6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers	5,000 workers and over
Bakers	1	2				
Chauffeurs and teamsters		1	4	1	1	1
Clerks and salesmen	1		2			
Clothing workers				1	1	
Food workers					2	
Hotel and restaurant workers		2				
Iron and steel workers			1		1	
Laundry workers		1				
Longshoremen		1				
Metal trades		2	2			
Miners			1		1	
Oil and chemical workers			1			
Municipal workers					1	
Teachers		1				
Textile workers		2	4			
Tobacco workers				1		
Other occupations		1				
Total	2	13	15	3	7	1

In Table 5 are shown the number of industrial disputes ending in December 1933, by industrial groups and classified duration.

TABLE 5.—NUMBER OF INDUSTRIAL DISPUTES ENDING IN DECEMBER 1933, BY INDUSTRIAL GROUP AND CLASSIFIED DURATION

Industrial group	Classified duration of strikes ending in December 1933				
	One-half month or less	Over one-half and less than 1 month	1 month and less than 2 months	2 and less than 3 months	3 and less than 4 months
Auto, carriage, and wagon workers			1		
Bakers	3				
Building trades	1				
Chauffeurs and teamsters	7				
Clothing workers	1	2			
Food workers	1				
Hotel and restaurant workers	1				
Iron and steel workers	1				
Laundry workers	1				
Leather workers		1			
Metal trades	2	1		3	
Miners	2	1			
Slaughtering and meat-packing employees			1		
Municipal workers	1				
Textile workers	4		6	1	1
Other occupations	1	1		1	
Total	26	6	8	5	1

Table 6 gives the number of disputes beginning in December 1933, by States and classified number of workers.

TABLE 6.—TOTAL NUMBER OF STRIKES AND WORKERS INVOLVED, CLASSIFIED BY STATES AND SIZE, FOR THE MONTH OF DECEMBER 1933

State	Total number of strikes	Total number of workers involved	Number of disputes beginning in December, involving—					
			6 and under 20 workers	20 and under 100 workers	100 and under 500 workers	500 and under 1,000 workers	1,000 and under 5,000 workers	5,000 workers and over
Alabama	1	175			1			
California	1	1,000					1	
Florida	1	1,500					1	
Georgia	1	21		1				
Illinois	5	2,820		1	2		2	
Kentucky	1	185			1			
Louisiana	1	75			1			
Maine	1	50		1				
Michigan	1	100			1			
Mississippi	1	200			1			
Missouri	2	658		1		1		
New Jersey	3	150		3				
New York	4	927	1	2		1		
Ohio	3	1,161	1		1		1	
Pennsylvania	15	17,902		3	8	1	2	1
Total	41	26,924	2	12	16	3	7	1

Conciliation Work of the Department of Labor in December 1933

By Hugh L. Kerwin, Director of Conciliation

THE Secretary of Labor, through the Conciliation Service, exercised her good offices in connection with 58 labor disputes during December 1933. These disputes affected a known total of 71,162 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached the strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workers directly and indirectly involved.

In addition to the cases shown, there were 58 cases in general industry, 8 controversies involving the provisions of the prevailing-wage law, 98 disputes involving violations of the N.I.R.A., and 13 cases involving wages and working conditions on civil-works projects.

LABOR DISPUTES HANDLED BY CONCILIATION SERVICE DURING THE MONTH OF DECEMBER 1933

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Haller Bros., Toledo, Ohio	Strike	Bakers and drivers	Alleged discrimination for union affiliation.	Adjusted. Returned. Regional board assisting in final settlement of terms.	1933 Nov. 30	1933 Dec. 2	55	
Kuhner Eckert Packing Co., Fort Wayne, Ind.	do	Packing-house workers.	Discharges and working conditions.	Adjusted. Reinstated with satisfactory agreement.	Dec. 1	Dec. 4	90	20
Indiana Foundry Co., Kokomo, Ind.	do	Core makers	Wages and conditions	Adjusted. Wage increase; will abide by code when adopted.	do	Dec. 16	47	80
A. F. Wardlow, Columbus, Ga	do	Sand and gravel workers.	Working conditions and discharges.	Adjusted. All workers reinstated	Dec. 4	do	10	6
Emporia Machine Works, North Emporia, Va.	Lockout	Molders	Asked wage increase; discharges	do	Nov. 20	Nov. 30	16	24
Bayonne, N.J., Textile Corporation, Bayonne, N.J.	Strike	Silk workers	Wage increase and union recognition.	Adjusted. Increase 15 percent and recognition of U.T.W. of A.	Sept. 13	Dec. 5	130	
United States locks, Starved Rock, Ill.	do	Lock builders	Wage controversy	Adjusted. Contractor agreed to pay 65 cents per hour, effective Dec. 1, 1933.	Nov. 30	Dec. 8	30	250
Cigar makers, Nanticoke, Pa	do	Cigar makers	Working conditions	Pending	Dec. 5		(1)	
Corset makers, Glen Lyon, Pa	do	Corset makers	Wages and discharges	do	do		120	
Springfield Coffin & Casket Co., Springfield, Ohio.	Controversy	Employees	Wages	Adjusted. Back wages paid in full.	Nov. 24	Dec. 5	21	
Wholesale grocers, Toledo, Ohio	Strike	Drivers	Asked increase and union recognition.	Adjusted. Increase from $4 to $8 per week and union recognition.	Nov. 28	Dec. 1	28	
Cetwick Silk Mills, Inc., Asheboro, N.C.	do	Silk throwers	Asked wage increase and improved conditions.	Adjusted. Satisfactory agreement.	Oct. 20	Nov. 30	370	1,100
Upholsterers, Chicago, Ill	do	Upholsterers	Asked union recognition	Pending	Dec. 4		(1)	
Bakers, Fort Worth, Tex	Threatened strike.	Bakers	Working conditions	do	Dec. 8		(1)	
Cline Ice Cream Co., Charleston, W.Va.	do	Drivers	Hours and wages	Adjusted. Agreement with increase.	Nov. 27	Nov. 29	15	100
Radio station building, Louisville, Ky.	Strike	Iron workers	Objection to nonunion workers	Pending	Dec. 6		(1)	
Canton Motor Coach, Inc., Canton, Ohio.	do	Employees	Asked increase and union recognition.	Adjusted. Small increase, union recognition and arbitration for future differences.	do	Dec. 8	140	
Peoples Street Railway, Dayton, Ohio.	Threatened strike.	Street-railway workers.	Asked agreement on working conditions.	Adjusted. Satisfactory agreement.	Nov. 28	Dec. 30	100	
Barbers, Chicago, Ill	do	Barbers	Low wages and lack of code for this industry.	Adjusted. Proposed hearing on barbers' code; strike averted.	Dec. 7	Dec. 14	900	
Telephone workers, Boston, Mass	Controversy	Telephone workers	Complaint against picketing	Adjusted. Dispensed with picketing; no further complaint.	Nov. 1	Nov. 6	8,000	
				Adjusted. Agreed to leave mat-	Nov. 27	Dec. 14	900	10

Telephone workers, Boston, Mass.	Controversy	Telephone workers	Complaint against picketing	Adjusted. Dispensed with picketing; no further complaint.	Nov. 1	Nov. 6	8,000	-------
Western Gas Co., Phoenix, Ariz.	do	Employees	Working conditions	Adjusted. Agreed to leave matter to governor of State.	Nov. 27	Dec. 14	900	10
John Donnelly Advertising Co., Boston, Mass.	Lockout	Bill posters	Wages and agreement	Pending	Aug. 1		(1)	-------
Natural Soda Products Co., Keller, Calif.	Strike	Employees	Discharges and union recognition	Adjusted. Regional board will continue hearings.	Dec. 1	Dec. 6	120	-------
American Zinc Co., Langloth, Pa.	do	do	Asked 30 percent wage increase, check-off and improved working conditions.	Pending	Dec. 7		500	-------
Pan-American Refinery Co., Texas City, Tex.	do	Building workers	Working conditions	do	Dec. 5		1,880	-------
Wagner Manufacturing Co., Sidney, Ohio.	Lockout	Metal polishers	do	Adjusted. Committee chosen to handle grievances.	Oct. 30	Dec. 16	4	25
Reeves Manufacturing Co., Dover, Ohio.	Strike	Employees	Discharges for union activity	Adjusted. Company agreed to comply with all provisions of N.R.A. code and reinstated all workers.	Dec. 9	Dec. 17	700	-------
Greer Steel Mill, Dover, Ohio	do	Steel workers	do	do	Dec. 11	do	235	-------
Plasterers, Pittsburgh, Pa.	Lockout	Plasterers	Working conditions	Pending	June 1		(1)	-------
Citrus fruit workers, Avon Park, Fla.	Strike	Citrus-fruit workers	do	do	Dec. 9		3,000	-------
Steffens Ice Cream & Dairy Co., Wichita, Kans.	do	Ice cream and dairy workers.	Wages and discharges	Unclassified. Referred to regional board of St. Louis, Mo.	Dec. 15	Dec. 19	14	60
Montana Power & Light Co., Butte, Mont.	do	Plumbers, steam fitters and electrical workers.	Asked 20 percent increase	Adjusted. Agreed to arbitration of differences.	Nov. 4	Dec. 22	267	-------
Kentucky Traction & Terminal Co., Lexington, Ky.	Threatened strike.	Traction and terminal workers.	Wages and hours of labor	Pending	Dec. 10		100	50
Power station building, Springfield, Ill.	Strike	Building trades	Wage scale	Adjusted. Agreed on 55 cents per hour.	Nov. 23	Dec. 15	100	1,200
Foster & Kleiser, Los Angeles, Calif.	Controversy	Bill posters	Wage cut	Pending	Nov. 26		128	-------
Kirtzman Bros., Los Angeles, Calif.	Strike	Clothing manufacturers.	Alleged violation of agreement	Adjusted. 860 workers returned; 40 took grievances to regional board.	Dec. 3	Dec. 8	900	-------
Colts Electrical Device, Hartford, Conn.	do	Electrical workers	Protest ballot taken by firm	Pending	Dec. 13		(1)	-------
Flour mill workers, Fort Worth, Tex.	Threatened strike.	Flour-mill workers	Working conditions	do	do		(1)	-------
Noblitt Sparks Co., Greenwood, Ind.	Strike	Auto accessory makers.	Discharges; alleged discrimination.	Unable to adjust. Company denied discrimination.	Dec. 11	Dec. 14	100	200
State Capitol Building, Helena, Mont.	Controversy	Remodeling and heating craftsmen.	Wage scale	Adjusted. Wages adjusted; hours to be decided later.	Dec. 5	Dec. 18	50	-------
Merit Shoe Co., Athol, Mass.	do	Shoe workers	Proposed wage reduction	Pending	Dec. 15		(1)	-------
Traction workers, Tulsa, Okla.	Threatened strike.	Traction workers	Working conditions	Adjusted. Increased from 2 to 7½ cents per hour; union recognized and agreement signed.	Dec. 14	Dec. 18	150	100
White Motor Co., Cleveland, Ohio.	do	Employees	Wages and working conditions	Adjusted. Union recognized and future conferences on grievances arranged.	Dec. 4	Dec. 15	2,200	300

[1] Not yet reported.

LABOR DISPUTES HANDLED BY CONCILIATION SERVICE DURING THE MONTH OF DECEMBER 1933—Continued

Company or industry and location	Nature of controversy	Craftsmen concerned	Cause of dispute	Present status and terms of settlement	Duration		Workers involved	
					Beginning	Ending	Directly	Indirectly
Bossong Hosiery Mills, Asheboro, N.C.	Strike	Hosiery workers	Wages	Unable to adjust. Conciliation not desired; asked action of National Labor Board.	1933 Dec. 3	1933 Dec. 12	180	580
Motor Freight Express, Reading, Pa.	do	Employees	Working conditions	Pending	Dec. 15		(1)	
Superior Supreme Pretzel Co., Reading, Pa.	do	Pretzel makers	Refusal to comply with decision of arbitration committee.	do	do		40	
Cigar makers, Tampa, Fla	Threatened strike.	Cigar makers	Wages and working conditions	do	do		10,000	2,000
Mountain Lake Corp., Lake Wales, Fla.	Strike	Maintenance workers.	Asked wage increase	Adjusted. Returned pending conferences; increases allowed.	Dec. 17	Dec. 23	131	
Sanitarium, Battle Creek, Mich.	Controversy	Workers in sanitarium.	Proposed dismissal of workers	Adjusted. Commissioner was assured no action of dismissal would be taken.	Dec. 20	Dec. 22	33	200
North Carolina Granite Co., Mount Airy, N.C.	Threatened strike.	Granite cutters	Wages, conditions of employment; recognition.	Pending	Nov. 8		182	731
Kebler Trucking Co., Indianapolis, Ind.	Strike	Truck drivers	Working conditions	Adjusted. Satisfactory agreement.	Dec. 21	Dec. 23	72	
Sausage makers, Chicago, Ill	do	Sausage makers	do	Adjusted. Satisfactory settlement. Regional board assisted in settlement.	Dec. 1	Dec. 19	1,400	400
Amling Greenhouse, Melrose Park, Chicago, Ill.	do	Greenhouse workers	do	Pending	Dec. 22		(1)	
Dupont Co., Deepwater, N.J	do	Brick masons	Wages	Adjusted. Agreed on $1 per hour for temporary work.	Dec. 26	Dec. 28	40	29,000
Marietta Manufacturing Co., Point Pleasant, W.Va.	Controversy	Shipbuilding workers.	Adjustment of hours and wages under code.	Adjusted. Satisfactory agreement.	Nov. 16	Dec. 19	350	
Kaufmann Department Store, Pittsburgh, Pa.	Strike	Truck drivers	Recognition and working conditions.	Adjusted. Allowed union recognition.	Dec. 15	Dec. 31	100	200
Laclede Steel Mill, Alton, Ill	do	Steel workers	Working conditions	Unclassified. Transferred to regional board.	Dec. 19	1934 Jan. 6	300	150
Bus drivers, Everett, Wash	Threatened strike.	Bus drivers	Asked wage increase from 42 to 55 cents per hour.	Adjusted. Union agreement with check-off; wage increase from 40 to 50 cents per hour.	do	Jan. 10	38	
Total							34,286	36,876

(1) Not yet reported.

Work of United States Board of Mediation, 1932–33

THE United States Board of Mediation was constituted under the terms of the Railroad Labor Act of 1926, to handle cases of dispute which the carriers and their employees have been unable to settle in conference. In such cases the law directs that the Board of Mediation shall endeavor to induce the parties to submit their controversy to an arbitration board composed of 3 or 6 members (as the parties may determine), of whom one third shall represent the carriers, one third the employees, and one third shall be neutral. If the representatives of the carriers and the employees fail to name the neutral member or members, it becomes the duty of the Board of Mediation to appoint such member or members.

The report of the board for the fiscal year ending June 30, 1933, recently issued, records 845 cases involving rates of pay, rules, or working conditions as having been submitted to it since it began operations in July 1926. Of this total 765 cases had been disposed of by June 30, 1933; 95 of these were acted upon during the fiscal year 1932–33. Of these 95 cases, 23 were settled through mediation, 3 were submitted to arbitration, 14 were withdrawn during process of mediation, 4 were withdrawn before mediation was instituted, 6 were withdrawn for other reasons, and 45 were closed by action of the board. During this period the board also received 1,268 cases involving grievances or differences arising out of interpretation or application of existing agreements concerning rates of pay, rules, or working conditions, which had been considered by but had not been decided upon by an appropriate adjustment board. Of this total 991 cases had been disposed of by June 30, 1933; 344 of these were acted upon during the fiscal year 1932–33. Of these 344 cases, 107 were settled through mediation, 37 were submitted to arbitration, 90 were withdrawn during process of mediation, 12 were withdrawn before mediation was instituted, 97 were closed by action of the board, and 1 was settled before arbitrators were named.

In submitting the report the board says:

> There has been no employee withdrawal from service during the past year. While carriers and employees do not always agree eye to eye as to all features of settlements made under the provisions of the Railway Labor Act, the conclusions reached (with only negligible exceptions) have been accepted in a fine and generous spirit and without evidences of recrimination or hostility by employees and carriers alike.
>
> Probably no better evidence of the relationship of employers and employees can be found than the very fact that interstate commerce has not been interrupted.
>
> The past year has been marked by uncertainties and indecisions on the part of both carriers and their employees.
>
> The times appear to have led all persons having differences in interstate commerce railroad industry to move with unusual caution and probably to make

[1] Not yet reported.

claims and hold out against claims for obvious reasons. We think it fair to say that many questions have arisen in the form of disputes, claims, etc., during the past 2 years of depressed conditions which would not have been brought forward in normal times. * * *

The railroad labor establishment, employers and employees, has manifested the same courageous and temperate purpose as has marked industry generally in the United States and has contributed its share in the direction of proceeding peacefully in the transaction of its business, and, we believe, with a desire to contribute its share to the stabilization of industrial relations and the establishment of better Nation-wide economic conditions.

WORKERS' EDUCATION AND TRAINING

Report of Federal Board for Vocational Education, 1932–33

UNDER the plans for the cooperation of the States with the Federal Government, local vocational education programs continued during the year ended June 30, 1933, in each of the 48 States and in Hawaii and Puerto Rico, according to the report of the Federal Board for Vocational Education, which is included in the report of the Secretary of the Interior for that year.[1]

In some States the plans have expanded even under the great pressure for retrenchment. For the first time since the creation of the Board, however, the total enrollment under State plans was below the total of the preceding year. This falling off was an inevitable result of the cut in Federal, State, and local revenues available for vocational education. In the fiscal year 1932–33 the expenditure from Federal funds amounted to $7,728,141 and from State and local funds, $22,398,643, making a total of $30,126,784, which was a reduction of $3,275,619 as compared with the expenditures of the previous year. Vocational training opportunities were correspondingly reduced and no funds were available for the promotion of vocational education in new sections, despite the need of broadening the scope of vocational training to include new occupations. The reductions in enrollments were found mainly in the registration of employed workers in vocational evening courses for instruction bearing on their every-day employment and in the enrollments of young wage earners for part-time instruction. The reduced enrollments indicate chiefly the widespread unemployment in the trades and industries. It is, of course, obvious that unemployed workers cannot take vocational training "supplementary to their daily employment", when they have no such employment.

As for young wage earners, it is found that when unemployment is on the increase some of them who normally would enroll for part-time vocational training return to the all-day schools. However, many cannot or at least do not do so and, for the time being, are

[1] By Executive order of June 10, 1933, effective on Aug. 10, the functions of the Federal Board for Vocational Education were transferred to the Department of the Interior, and the board was made an advisory board to act without compensation. On Oct. 10, 1933, the Secretary of the Interior assigned the functions of the board to the Commissioner of Education, the necessary personnel under the board to be organized as a subdivision under the general supervision of the Commissioner of Education, who was directed to proceed with the necessary reorganization of the Office of Education.

neither at work nor attending school. During the year under review, in New York City and in numerous other communities unemployed adult workers enrolled in all-day schools, but such enrollments were not reported under State vocational programs. The unemployment situation has not so directly affected the enrollments in home-economics and agricultural schools, which have continued to increase in 1933.

For the 12 months ended June 30, 1933, the total enrollment in vocational courses of all types carried on by local communities under State plans was 1,149,495, including boys, girls, and adults of all ages, distributed as shown in table 1:

TABLE 1.—ENROLLMENT IN VOCATIONAL SCHOOLS OPERATED UNDER STATE PLANS, YEAR ENDED JUNE 30, 1933 [1]

Type of school	Agricultural	Trade and industrial	Home economics	Total
Schools federally aided:				
Evening	81,689	123,777	136,705	342,171
Part-time	12,558	255,204	31,730	299,492
Trade extension	12,558	38,064	31,730	82,352
General continuation		217,140		217,140
All day	159,858	110,919	109,131	379,908
Day-unit	10,000			10,000
All types	264,105	489,900	277,566	1,031,571
Schools not federally aided:				
Evening	1,683	31,817	5,678	39,178
Part-time		193		193
Trade extension		161		161
General continuation		32		32
All-day	190	15,602	62,761	78,553
All types	1,873	47,612	68,439	117,924
Total:				
Evening	83,372	155,594	142,383	381,349
Part-time	12,558	255,397	31,730	299,685
Trade extension	12,558	38,225	31,730	82,513
General continuation		217,172		217,172
All-day	160,048	126,521	171,892	458,461
Day-unit	10,000			10,000
All types	265,978	537,512	346,005	1,149,495
Increase or decrease compared with preceding year:				
Evening	−6,030	−3,465	−10,061	−19,556
Part-time	+1,766	−61,540	−7,088	−66,862
Trade extension	+1,766	−7,209	−7,088	−12,531
General continuation		−54,331		−54,331
All-day	+14,177	+22,926	+23,838	+60,941
Day-unit	−1,190			−1,190
All types	+8,723	−42,079	+6,689	−26,667

[1] Provisional figures.

Total enrollment in agricultural, trade and industrial, and home-economics courses under State plans from 1929 to 1933 by years are given in table 2.

TABLE 2.—ENROLLMENT IN VOCATIONAL SCHOOLS OPERATED UNDER STATE PLANS, 1929 TO 1933, BY YEARS

Year	Agricultural courses	Trade and industrial	Home economics	Total	
				Number	Increase or decrease
1929	171,466	627,397	249,113	1,047,976	+48,945
1930	193,325	633,153	238,058	1,064,536	+16,560
1931	237,200	602,755	227,601	1,117,556	+53,020
1932	257,255	579,591	339,316	1,176,162	+58,606
1933 [1]	265,978	537,512	346,005	1,149,495	−26,667

[1] Provisional figures.

In table 3 the expenditures from Federal, State, and local funds for vocational education under State plans are shown by years for 1929 to 1933.

TABLE 3.—EXPENDITURE OF FEDERAL, STATE, AND LOCAL MONEY UNDER STATE PLANS FOR VOCATIONAL EDUCATION, 1929 TO 1933

Year	Expenditures from—		Increase or decrease in expenditures from—	
	Federal funds	State and local funds	Federal funds	State and local funds
1929	$6,878,530	$20,595,776	+$57,078	+$1,701,467
1930	7,404,223	22,504,675	+525,693	+1,908,900
1931	7,978,729	24,164,463	+574,506	+1,659,787
1932	8,414,834	24,987,569	+436,105	+823,106
1933 [1]	7,728,141	22,398,643	−686,693	−2,588,926

[1] Provisional figures.

Research

AMONG the research projects of the Federal Board for Vocational Education during the fiscal year ended June 30, 1933, was an inquiry to determine "in what ways vocational programs can be made to function effectively in maintaining for our workers continuous occupational adjustment, thereby avoiding as far as may be possible displacement and unemployment in the face of an intensely dynamic economic situation."

In this matter of vocational training and adjustment the obligation of society extends to workers of all classes. And it is not limited to youth. It extends to workers of all ages, employed and unemployed, more particularly in the present situation to adult workers being thrown out of occupational adjustment by the continuous economic, technological, and social changes. These changes present unlimited possibilities for advancing society's welfare, but they present at the same time serious problems of economic insecurity of our workers, with which society and specifically our program of vocational education supported out of public funds must deal.

Among the studies carried on in the year 1932–33 were those dealing with the following subjects: Placement opportunities for farm operators enrolled in agricultural part-time schools; the needs of out-of-school farm boys for vocational training; a follow-up of

former students of agriculture now engaged in farming as operators; the organization and conditions necessary for the successful working out of agricultural programs in small rural high schools. Two bulletins were issued, one dealing with the organization and conduct of agricultural part-time schools and the other giving a comparison of the earning abilities of vocationally trained farmers with the earnings of farmers not so trained.

A bulletin was prepared on "the home project in homemaking education", and some progress was made on a preliminary draft for a report on trends in commercial occupations.

Growing Need for Technical Experts

ACCORDING to recent surveys, it would seem that the demand for trained technicians has outstripped the increase in provisions being made in vocational-education programs for the training of such workers.

The increasing value of broad technical knowledge in industrial fields is generally recognized. For the industrial technician the training is of a subprofessional grade, as compared with the training of the industrial engineer, and the demand for this subprofessional training appears to have been in general less adequately met than has the demand for training industrial engineers. It may be added that the training required by the technician is a type of training which can commonly be most advantageously provided in organized courses, and a type of training also which industry can seldom provide economically if at all.

The opportunities for cooperative service of far-reaching social value presented to vocational teachers are discussed in connection with the back-to-the-farm and farm-factory movement, live-at-home programs, and the growing tendency of homemakers to add wage earning to their homemaking activities.

Problem of Boys and Girls 14 to 16 Years Old

THE most serious problem arising in the last few years in the educational field, according to the latest annual report of the Federal Board, is the question of what to do with boys and girls from 14 to 16 years of age who have completed the full-time compulsory school-attendance requirements and are still too young for gainful employment.

The period of compulsory full-time school attendance has been extended in some States to 16 years, with provision for part-time attendance in continuation schools for employed young workers even beyond that age, but in a majority of States there is a gap between the age of release from compulsory full-time school attendance and the minimum age of employment as fixed in child-labor legislation, or as determined independently by industry, which of its own initiative has been more generally refusing to employ workers under 16, and even in some occupations under 18 years of age.

Employment opportunities for these young people, freely or under work permits which require part-time attendance at continuation

schools, have been decreasing for some years, but the codes formulated under the National Industrial Recovery Act "have been so drawn as practically to eliminate all employment in these ages by fixing the minimum age of employment at 16 years." According to the Federal Board for Vocational Education, it may be assumed that this minimum age of employment will be continued after the existing emergency is over.

The Federal Vocational Education Act provides that one third of the Federal funds allotted for trade and industrial education, if expended in the States, must be used for schools giving instruction during a part of the regular working time to youthful workers over 14 years old. It would seem that in the future such schools must be operated almost entirely for workers over 16 years of age.

It is pointed out in the report that school authorities must confront the problem of providing some other educational discipline for children between 14 and 16 years of age who are unable to benefit by additional formal academic training.

Need for Continuous Training for Adult Workers

THE theory that a worker could be trained once for all, either through apprenticeship or by a vocational course or by some combination of apprenticeship and organized training, the report states, is no longer valid under present-day conditions. The necessity for further training may develop for an adult worker at any age, and to meet this need a training service must be maintained which will parallel trade developments and which will be available to adult workers whenever occasion requires it. Such a service should not be confined to training for the manufacturing industries. The need for a continuous training service for adults is urgent in all fields.

Vocational Training and Industrial Recovery

THE importance of vocational training in the new techniques in the program of industrial recovery is stressed, as this recovery and the elimination of unemployment will be not simply a placement procedure of returning workers to jobs for which they are fitted, "but rather a training procedure of preparing labor for the new jobs that have become available."

Activities Under Federal Vocational Rehabilitation Act

WASHINGTON, at the last session of its legislature, accepted the Federal Vocational Rehabilitation Act. On July 1, 1933, that State inaugurated a rehabilitation service, making the forty-fifth State cooperating in this work.

During industrial depressions the difficulties which the physically handicapped face become greater. Even in such crises many thousands of physically disabled men and women can be trained and placed in gainful employment. In the fiscal year closed June 30, 1933, under State programs nearly 11,000 men and women were vocationally rehabilitated and over half of them were permanently placed in employment. At the end of the year some 25,300 additional physically handicapped persons were reported on the rolls of the State rehabilitation services in the course of being vocationally rehabilitated.

All of these dependent, disabled, and unemployed men and women on State rolls, when reported as rehabilitated, will have received expert vocational guidance leading to the selection of some occupation in which their disability will not be a vocational handicap, will have been thoroughly prepared for this occupation, placed in employment in it, and followed up for a period after placement to insure permanent restoration to self-supporting status.

During the past year our national vocational rehabilitation program for the physically handicapped has shown steady gains in accomplishment. Under unprecedented difficulties the States in general have maintained their rehabilitation service and the development of the national program has been steady. In the year 1932–33 the total amount expended under State plans for vocational rehabilitation was $2,176,126, of which $1,011,440 was Federal money and $1,164,686 State and local funds. The total expenditure of the preceding year under State plans was $2,165,814.[2] The 45 States cooperating with the National Government in the program of vocational rehabilitation and occupational readjustment for disabled persons have indicated that they intended to continue to support the program and to extend their services further through additional State and local funds.

The Federal act which provided for the setting up of a national system of employment offices, effective July 1, 1933, provides that State employment office systems cooperate with State vocational rehabilitation agencies. In various States plans have been formulated for making these cooperative relationships practical. With the development of the employment system "this cooperation between employment and vocational rehabilitation services will expand."

Plans for the cooperation of the National and State emergency relief administrations with the Federal and State vocational rehabilitation services are being worked out in order that during the existing economic depression a higher percentage of handicapped persons may be removed from the public relief rolls and be prepared for and placed in self-supporting occupations.

[2] Monthly Labor Review, February 1933, p. 326.

LABOR TURN-OVER

Labor Turn-over in Manufacturing Establishments, Fourth Quarter of 1933

ACCORDING to reports received by the Bureau of Labor Statistics from representative manufacturing establishments in 148 census industry classifications, the accession rate for the fourth quarter of 1933 was 11.31. This was slightly higher than the fourth quarter of 1932, but much lower than for the third quarter of 1933.

The quit and discharge rates for the fourth quarter of the year, while higher than the corresponding quarter of last year, was lower than for the third quarter of 1933.

The lay-off rate for the fourth quarter exceeded that of the fourth quarter of 1932 and the third quarter of 1933.

The rates shown herein represent the number of changes per 100 employees that took place during the 3 months ending December 31, 1933. The form of average used by the Bureau of Labor Statistics for compiling turn-over rates is the arithmetic mean. The rates shown in table 1 are compiled from reports made to the Bureau from establishments employing approximately 1,000,000 persons. In the industries for which separate indexes are presented (see table 2), reports were received from representative plants employing at least 25 percent of the workers in each industry, as shown by the Census of Manufactures of 1929.

In addition to the separation rate and the accession rate, the net turn-over rate is shown. Net turn-over means the rate of replacement, that is, the number of jobs that are vacated and filled per 100 employees. In a plant that is increasing its force, the net turn-over rate is the same as the separation rate, because while more people are hired than are separated from their jobs, the number hired above those leaving is due to expansion and cannot justly be charged to turn-over. On the other hand, in a plant that is reducing its number of employees, the net turn-over rate is the same as the accession rate, because while more people are separated from the pay roll than are hired, the excess of separations over accessions is due to a reduction of force and therefore cannot logically be charged as a turn-over expense.

Table 1 shows for manufacturing as a whole the total separation rate, subdivided into the quit, discharge and lay-off rates, together with the accession rate and the net turn-over rate, for each quarter of 1932 and 1933.

TABLE 1.—QUARTERLY TURN-OVER RATES IN REPRESENTATIVE FACTORIES IN 148 INDUSTRIES

Period	Separation rates						Total separation rate		Accession rate		Net turn-over rate	
	Quit		Discharge		Lay-off							
	1932	1933	1932	1933	1932	1933	1932	1933	1932	1933	1932	1933
Quarter:												
First	2.28	1.56	0.58	0.38	8.18	10.14	11.04	12.08	9.65	8.50	9.65	8.50
Second	2.15	2.23	.49	.52	12.92	4.46	15.56	7.21	7.80	20.86	7.80	7.21
Third	2.10	4.16	.45	.78	10.78	6.31	13.33	11.25	12.55	22.88	12.55	11.25
Fourth	1.77	2.18	.43	.62	8.75	11.34	10.95	14.14	10.50	11.31	10.50	11.31

Table 2 shows the quit, discharge, lay-off, accession, and net turn-over rates for the 10 industries for which the Bureau's sample covers a sufficiently large number of firms to justify the publishing of separate industry figures.

TABLE 2.—QUARTERLY TURN-OVER RATES IN SPECIFIED INDUSTRIES

Class of rates	Automobiles			Boots and shoes			Bricks		
	Fourth quarter 1932	Third quarter 1933	Fourth quarter 1933	Fourth quarter 1932	Third quarter 1933	Fourth quarter 1933	Fourth quarter 1932	Third quarter 1933	Fourth quarter 1933
Quit	1.51	4.82	3.42	2.24	5.35	1.90	0.64	2.58	1.74
Discharge	.73	1.74	.90	.45	1.16	.60	.24	.73	.28
Lay-off	15.88	12.05	19.90	6.17	4.27	10.42	39.54	22.05	39.37
Total separation	18.12	18.61	24.22	8.86	10.78	12.92	40.42	25.36	41.39
Accession	28.04	28.76	40.02	6.38	15.20	7.75	18.83	29.32	20.90
Net turn-over	18.12	18.61	24.22	6.38	10.78	7.75	18.83	25.36	20.90
	Cotton manufacturing			Foundries and machine shops			Furniture		
Quit	3.30	5.53	3.33	0.64	2.42	1.57	0.60	2.23	1.68
Discharge	.77	1.25	.86	.21	.72	.53	.23	1.09	.69
Lay-off	7.20	9.68	9.81	8.43	5.84	10.24	11.19	5.56	25.97
Total separation	11.27	16.46	14.00	9.28	8.98	12.34	12.02	8.88	28.34
Accession	13.55	21.30	7.76	6.40	27.14	10.15	9.78	36.56	9.21
Net turn-over	11.27	16.46	7.76	6.40	8.98	10.15	9.78	8.88	9.21
	Iron and steel			Men's clothing			Sawmills		
Quit	1.17	2.51	2.05	2.14	3.10	2.26	1.79	3.00	2.51
Discharge	.14	.33	.25	.17	.58	.39	1.23	1.26	1.14
Lay-off	4.62	2.33	7.10	7.79	6.85	10.98	27.96	10.38	20.13
Total separation	5.93	5.17	9.40	10.10	10.53	13.63	30.98	14.64	23.78
Accession	4.44	22.70	4.05	8.54	13.26	7.28	16.96	27.05	12.13
Net turn-over	4.44	5.17	4.05	8.54	10.53	7.28	16.96	14.64	12.13
	Slaughtering and meat packing								
Quit	2.12	4.21	2.68						
Discharge	.64	1.11	1.05						
Lay-off	17.42	13.96	21.66						
Total separation	20.18	19.28	25.39						
Accession	17.91	36.99	20.86						
Net turn-over	17.91	19.28	20.86						

Among these 10 industries, automobiles had the highest and foundry and machine shops the lowest quit rate during the fourth quarter of 1933. The highest discharge rate occurred in the sawmill industry; the lowest in the iron and steel industry. Brick manufacture showed the highest lay-off rate; the lowest lay-off rate occurred in the iron and steel industry. The highest accession, or hiring rate, occurred in the automobile industry. The accession rate for this industry for the fourth quarter of 1933 was 40.02. The lowest accession rate, 4.05, occurred in the iron and steel industry. The highest net turn-over rate, 24.22, was shown by the automotive industry. The iron and steel industry had the lowest quarterly turn-over rate, 4.05.

Labor Turn-Over in Foundries and Machine Shops, 1931 and 1932

THE present article, which is the fourth of a series of articles on labor turn-over,[1] covers 373 identical establishments in the foundry and machine-shop industry for the years 1931 and 1932. These firms had an average monthly employment roll of 104,796 in 1931 and 81,619 in 1932.

The 1931 net turn-over rate for this industry was 30.85. This compares with a net turn-over rate for industry in general of 35.72. During 1932 the net turn-over rate for foundries and machine shops was 28.20, while that for manufacturing as a whole was 40.50. The foundry and machine shop turn-over rate, as will be noted, was lower than the all-manufacturing rate for both years. The comparison during 1932 was especially favorable to the foundry and machine-shop industry.

Table 1 shows the number of firms and employees, and the number of quits, discharges, lay-offs, and accessions in 373 identical plants in the foundry and machine-shop industry, by rate groups, for the years 1931 and 1932.

[1] The previous articles dealt, respectively, with the automotive industry (Monthly Labor Review, June 1933, p. 1316), boot and shoe industry (October 1933, p. 893), and the cotton manufacturing industry (November 1933, p. 1152).

TABLE 1.—CHANGES IN PERSONNEL IN 373 IDENTICAL ESTABLISHMENTS IN THE FOUNDRY AND MACHINE SHOP INDUSTRY DURING 1931 AND 1932, BY RATE GROUPS

Quits

Rate group	Firms		Employees		Number of quits	
	1931	1932	1931	1932	1931	1932
Under 2.5 percent	131	212	18,892	31,956	184	297
2.5 and under 5 percent	67	73	16,575	28,625	676	1,108
5 and under 7.5 percent	60	38	35,811	14,191	2,183	833
7.5 and under 10 percent	36	17	12,039	2,815	1,042	252
10 and under 15 percent	43	18	12,049	2,376	1,412	273
15 and under 20 percent	17	7	2,356	733	414	130
20 and under 25 percent	12	2	3,829	90	852	19
25 and under 30 percent	5	1	1,282	101	351	29
30 and under 35 percent	1	2	1,843	423	578	150
35 percent and over	1	3	120	309	84	178
Total	373	373	104,796	81,619	7,776	3,269

Discharges

Rate group	Firms		Employees		Number of discharges	
	1931	1932	1931	1932	1931	1932
Under 0.5 percent	153	253	25,166	39,741	22	34
0.5 and under 1 percent	28	27	22,582	9,037	147	60
1 and under 2 percent	40	35	15,219	16,306	214	241
2 and under 3 percent	47	18	17,049	11,034	407	251
3 and under 4 percent	16	13	2,201	1,266	79	41
4 and under 5 percent	13	6	6,748	1,000	298	44
5 and under 7 percent	25	6	7,630	365	414	22
7 and under 9 percent	9	6	1,344	1,488	106	114
9 and under 11 percent	6	2	929	168	98	16
11 percent and over	36	7	5,928	1,214	1,190	189
Total	373	373	104,796	81,619	2,975	1,012

Lay-offs

Rate group	Firms		Employees		Number of lay-offs	
	1931	1932	1931	1932	1931	1932
Under 5 percent	30	50	4,554	11,434	123	243
5 and under 10 percent	43	28	17,094	9,933	1,151	701
10 and under 20 percent	54	51	16,544	12,900	2,411	1,884
20 and under 30 percent	55	46	17,108	10,264	4,020	2,637
30 and under 40 percent	35	26	11,481	13,066	3,885	4,485
40 and under 60 percent	46	43	13,429	8,434	6,427	4,268
60 and under 90 percent	48	44	13,933	6,233	9,876	4,581
90 and under 120 percent	24	23	4,875	3,882	5,017	4,030
120 and under 150 percent	14	17	3,418	2,060	4,476	2,767
150 percent and over	24	45	2,360	3,413	4,534	7,924
Total	373	373	104,796	81,619	41,920	33,520

TABLE 1.—CHANGES IN PERSONNEL IN 373 IDENTICAL ESTABLISHMENTS IN THE FOUNDRY AND MACHINE SHOP INDUSTRY DURING 1931 AND 1932, BY RATE GROUPS—Continued

Total separations

Rate group	Firms		Employees		Total separations	
	1931	1932	1931	1932	1931	1932
Under 10 percent	25	52	3,900	11,992	250	612
10 and under 20 percent	47	49	20,128	15,842	3,031	2,267
20 and under 30 percent	63	48	19,492	10,354	4,948	2,525
30 and under 40 percent	47	34	17,891	11,449	6,578	4,054
40 and under 60 percent	57	53	14,488	14,237	7,159	6,610
60 and under 90 percent	55	49	10,793	8,036	7,847	5,846
90 and under 120 percent	33	22	10,303	2,696	10,375	2,724
120 and under 150 percent	17	18	4,754	3,453	6,423	4,691
150 and under 180 percent	11	16	1,238	1,097	1,972	1,823
180 percent and over	18	32	1,809	2,463	4,088	6,649
Total	373	373	104,796	81,619	52,671	37,801

Accessions

Rate group	Firms		Employees		Number of accessions	
	1931	1932	1931	1932	1931	1932
Under 5 percent	80	93	30,605	32,536	758	608
5 and under 10 percent	43	40	15,095	7,011	1,041	469
10 and under 20 percent	65	56	22,146	12,306	3,238	1,693
20 and under 30 percent	37	31	5,411	4,333	1,338	1,058
30 and under 40 percent	26	29	6,211	9,541	2,026	3,362
40 and under 50 percent	25	19	5,059	1,495	2,269	666
50 and under 70 percent	33	22	5,933	4,455	3,410	2,689
70 and under 110 percent	37	37	8,776	5,888	7,823	5,088
110 and under 150 percent	16	19	4,250	1,715	5,207	2,264
150 percent and over	11	27	1,310	2,339	3,123	5,643
Total	373	373	104,796	81,619	30,233	23,540

Net turn-over

Rate group	Firms		Employees		Net turn-over	
	1931	1932	1931	1932	1931	1932
Under 10 percent	124	140	46,169	40,610	1,823	1,083
10 and under 20 percent	67	54	22,160	11,972	3,236	1,571
20 and under 30 percent	39	33	5,388	4,958	1,314	1,188
30 and under 40 percent	29	29	7,459	9,428	2,466	3,320
40 and under 50 percent	23	20	3,934	1,601	1,762	706
50 and under 60 percent	19	17	4,720	3,557	2,590	1,984
60 and under 70 percent	13	9	1,164	2,047	762	1,363
70 and under 100 percent	30	23	8,307	3,346	7,041	2,807
100 and under 130 percent	17	14	4,166	1,319	4,616	1,549
130 percent and over	12	34	1,329	2,781	2,887	5,929
Total	373	373	104,796	81,619	28,497	21,500

The quit rate for the foundry and machine shop industry for both 1931 and 1932 was lower than that for any other industry for which the Bureau presents separate turn-over figures. Of a total of 373 firms in 1931, 131 employing 18,892 people had a quit rate of less than 2.5 percent, while in 1932, 212 firms employing an average of 31,956 people were in this class. Only 7 firms in 1931, and 6 firms in 1932, had an annual quit rate of over 25 percent.

In 1931, 181 firms and in 1932, 280 firms had a discharge rate of less than 1 percent. In contrast, 36 firms in 1931 and 7 firms in 1932 had an annual discharge rate of over 11 percent.

The annual lay-off rate for the foundry and machine shop industry was 43.38 for the year 1931, and 40.65 for the year 1932. A good many firms had extremely low lay-off rates, even in these 2 years when lay-off rates were much higher than normal. In 1931, 73 foundry and machine shop firms, and in 1932, 78 firms had an annual lay-off rate of less than 10 percent.

The 1931 accession, or hiring, rate for the foundry and machine shop industry was 30.85 and 28.20 for 1932. The accession rate for 123 firms was less than 10 percent during 1931, while during 1932, 133 firms were in this group. However, 27 firms in 1931 and 46 firms in 1932 had a hiring rate of over 110 percent.

Of the 373 firms from which reports were received for the years 1931 and 1932, 124 in 1931, and 140 in 1932, had a net turn-over rate of less than 10 percent. In contrast with this extremely good showing, 29 firms in 1931 and 48 firms in 1932 had an annual net turn-over rate of over 100 percent.

Table 2 shows the comparative turn-over rates in 373 identical establishments in the foundry and machine shop industry for the years 1931 and 1932, by size of establishments.

TABLE 2.—COMPARATIVE LABOR TURN-OVER RATES, 1931 AND 1932, IN 373 FOUNDRIES AND MACHINE SHOPS HAVING FEWER THAN 100 EMPLOYEES AND THOSE HAVING 100 OR MORE EMPLOYEES

Class of rate	Firms having—			
	Under 100 employees, 1931	100 or more employees, 1931	Under 100 employees, 1932	100 or more employees, 1932
Quit	5.49	7.72	4.24	3.97
Discharge	4.27	2.62	1.00	1.27
Lay-off	53.86	37.86	65.96	37.58
Total separation	63.62	48.20	71.20	42.82
Accession	36.74	27.63	46.21	26.41
Net turn-over	35.17	25.96	42.32	24.10
Number of firms	196	177	196	177
Percent of employees	13.4	86.6	12.3	87.7

Of the foundry and machine shop firms included in this study, 196 had fewer than 100 employees per establishment and 177 firms had 100 or more employees per establishment. The 196 firms having fewer than 100 employees per establishment had an average of 14,039 persons on their pay roll during the year 1931 and 10,035 employees on their pay roll for the year 1932. The 177 firms having 100 or more employees per establishment had a total of 90,757 in 1931 and 71,584 in 1932 on their rolls.

The establishments having 100 or more employees had a much better turn-over experience than the firms having less than 100 employees. In 1931 the net turn-over rate for the larger firms was 25.96, as compared with 35.17 for the smaller firms. The 1932 net turn-over rate for the larger firms was 24.10, as compared with 42.32 for the smaller firms.

Considering the quit rate for the two grades of establishments, it will be seen that in 1931 the smaller firms had a lower quit rate, while in 1932 the larger firms had a lower quit rate. The larger firms were able to keep their lay-off rate from mounting as high as that of the smaller firms in both 1931 and 1932.

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HOUSING

Building Operations in Principal Cities of the United States, December 1933

THE Bureau of Labor Statistics received reports of building operations from 756 identical cities having a population of 10,000 or over for the months of November and December 1933.

The number of buildings for which permits were issued in these cities decreased 31.5 percent comparing December with November. The value of the buildings increased two tenths of 1 percent.

The cost figures as shown in the following tables are as estimated by the prospective builder on applying for his permit to build. No land costs are included. Only building operations within the corporate limits of the cities enumerated are shown. The States of Illinois, Massachusetts, New Jersey, New York, North Carolina, and Pennsylvania, through their departments of labor, are cooperating with the Federal Bureau in the collection of these data.

Comparisons, November and December 1933

TABLE 1 shows the estimated cost of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 756 identical cities of the United States having a population of 10,000 or over, by geographic divisions.

TABLE 1.—ESTIMATED COST OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 756 IDENTICAL CITIES AS SHOWN BY PERMITS ISSUED IN NOVEMBER AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings (estimated cost)			New nonresidential buildings (estimated cost)		
	November 1933	December 1933	Percent of change	November 1933	December 1933	Percent of change
New England	$1,081,400	$819,450	−24.2	$1,746,985	$683,400	−60.9
Middle Atlantic	9,568,125	4,210,250	−56.0	2,460,688	4,963,645	+101.7
East North Central	518,700	301,817	−41.8	933,073	2,460,698	+163.7
West North Central	417,362	223,100	−46.5	499.081	808,569	+62.0
South Atlantic	623,294	533,229	−14.4	904,813	3,287,061	+263.3
South Central	367,559	316,102	−14.0	2,210,204	1,728,628	−21.8
Mountain and Pacific	1,129,804	871,511	−19.5	4,232,217	3,419,316	−17.7
Total	13,706,244	7,275,459	−46.9	12,987,061	17,351,317	+33.6

Geographic division	Additions, alterations, and repairs (estimated cost)			Total construction (estimated cost)			Number of cities
	November 1933	December 1933	Percent of change	November 1933	December 1933	Percent of change	
New England	$1,030,131	$1,050,540	+2.0	$3,858,516	$2,553,390	−33.8	110
Middle Atlantic	2,693,959	4,228,757	+57.0	14,722,772	13,402,652	−9.0	170
East North Central	1,105,917	913,527	−17.4	2,557,690	3,676,042	+43.7	174
West North Central	330,665	379,796	+14.9	1,247,108	1,411,465	+13.2	67
South Atlantic	890,760	1,376,189	+54.5	2,418,867	5,196,479	+114.8	77
South Central	632,667	841,349	+33.0	3,210,430	2,886,079	−10.1	77
Mountain and Pacific	1,326,351	1,358,379	+4.6	6,688,352	5,649,206	−13.6	81
Total	8,010,430	10,148,537	+26.7	34,703,735	34,775,313	+2	756

Permits were issued during December for buildings to cost $34,775,313, which is two tenths of 1 percent in excess of the valuation of buildings for which permits were issued in November. Three of the seven geographic divisions showed increases in the value of buildings for which permits were issued, comparing December with November. The greatest increase occurred in the South Atlantic States.

The estimated cost of new residential buildings for which permits were issued in December decreased 46.9 percent as compared with November. Decreases occurred in all seven of the geographic divisions, ranging from 14 percent in the South Central States to 56 percent in the Middle Atlantic States. The large decrease in the Middle Atlantic States in December as compared with November was caused by the issuing during November of permits for several large apartment buildings in New York City. The cost of these buildings totaled over $7,000,000.

The value of new nonresidential buildings for which permits were issued in December showed an increase of 33.6 percent as compared with November. Four of the seven geographic divisions showed increases for this type of building.

The erection of buildings financed from public works funds is beginning to have a sizeable influence on the trend of nonresidential buildings.

Indicated expenditures for additions, alterations, and repairs increased 26.7 percent in December as compared with November. When the phrase "indicated expenditures" is used it does not mean that the money was all to be expended during the month the permits were issued; in fact, a very small percentage is expended during that month. The expenditure of money occurs during a number of months after the building is started, the time varying with the size and type of the building.

Table 2 shows the number of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 756 cities of the United States, by geographic divisions.

TABLE 2.—NUMBER OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 756 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN NOVEMBER AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings		New nonresidential buildings		Additions, alterations, and repairs		Total construction	
	November 1933	December 1933	November 1933	December 1933	November 1933	December 1933	November 1933	December 1933
New England	207	129	722	308	1,743	957	2,672	1,394
Middle Atlantic	338	188	843	537	3,593	2,885	4,774	3,610
East North Central	100	61	758	425	1,775	1,145	2,633	1,631
West North Central	134	56	444	202	710	468	1,288	726
South Atlantic	154	130	451	277	2,334	1,663	2,939	2,070
South Central	187	127	362	288	1,616	1,089	2,165	1,504
Mountain and Pacific	311	214	880	646	3,591	2,756	4,782	3,616
Total	1,431	905	4,460	2,683	15,362	10,963	21,253	14,551
Percent of change		−36.8		−39.8		−28.6		−31.5

There was a decrease of 36.8 percent in the number of new residential buildings, comparing permits issued in December with those issued in November. All geographic divisions showed decreases in the number of new residential buildings comparing these 2 months.

New nonresidential buildings decreased 39.8 percent, and additions, alterations, and repairs, 28.6 percent. Decreases were shown in all seven geographic divisions for both of these classes of building operations.

The December total for the number of building operations as a whole decreased 31.5 percent.

Table 3 shows the estimated cost and the number of families provided for in the different kinds of housekeeping dwellings for which permits were issued in 756 identical cities in November and December, by geographic divisions.

TABLE 3.—ESTIMATED COST AND NUMBER OF FAMILIES PROVIDED FOR IN THE DIFFERENT KINDS OF HOUSEKEEPING DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 756 IDENTICAL CITIES IN NOVEMBER AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS

Geographic division	1-family dwellings				2-family dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	November 1933	December 1933	November 1933	December 1933	November 1933	December 1933	November 1933	December 1933
New England	$1,060,500	$745,650	204	118	$20,900	$50,300	5	16
Middle Atlantic	1,444,225	823,950	260	149	239,100	164,800	62	49
East North Central	493,600	278,567	96	57	21,100	14,250	6	5
West North Central	394,662	221,100	129	55	17,700	2,000	5	2
South Atlantic	590,129	494,979	148	127	5,830	8,250	6	4
South Central	274,181	270,402	167	116	85,478	41,000	34	19
Mountain and Pacific	1,047,854	716,631	293	197	58,350	54,880	30	21
Total	5,305,151	3,551,279	1,297	819	448,458	335,480	148	116
Percent of change		−33.1		−36.9		−25.2		−21.6

Geographic division	Multifamily dwellings				Total, all kinds of housekeeping dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	November 1933	December 1933	November 1933	December 1933	November 1933	December 1933	November 1933	December 1933
New England	0	$23,500	0	9	$1,081,400	$819,450	209	143
Middle Atlantic	$7,884,000	3,221,500	2,477	1,194	9,567,325	4,210,250	2,799	1,392
East North Central	0	9,000	0	4	514,700	301,817	102	66
West North Central	5,000	0	4	0	417,362	223,100	138	57
South Atlantic	27,335	30,000	16	15	623,294	533,229	170	146
South Central	4,000	4,700	4	3	363,659	316,102	205	138
Mountain and Pacific	23,600	100,000	7	40	1,129,804	871,511	330	258
Total	7,943,935	3,388,700	2,508	1,265	13,697,544	7,275,459	3,953	2,200
Percent of change		−57.3		−49.6		−46.9		−44.3

Comparing December with November, there was a decrease of 33.1 percent in the estimated cost of 1-family dwellings. The number of family-dwelling units provided in these single dwellings decreased 36.9 percent. The decrease was general as all seven geographic divisions provided fewer dwelling units in December than in November.

The value of 2-family dwellings decreased 25.2 percent comparing December with November permits. Dwelling units provided in this class of dwelling decreased 21.6 percent. The New England was the only geographic division registering an increase in this type of dwelling.

The cost of apartment houses for which permits were issued in December was less than one half of the value of apartment houses for which permits were issued in November. This large decrease was entirely caused by the decrease in apartment-house construction in the city of New York during December. Family-dwelling units in apartment houses decreased 49.6 percent.

Indicated expenditures for all types of building operations decreased 46.9 percent and the total family-dwelling units to be provided by the dwellings for which permits were issued in December decreased 44.3 percent, as compared with the previous month.

Table 4 shows the index number of families provided for and the index numbers of indicated expenditures for new residential buildings, for new nonresidential buildings, for additions, alterations, and repairs, and for total building operations.

TABLE 4.—INDEX NUMBERS OF FAMILIES PROVIDED FOR AND OF INDICATED EXPENDITURES FOR BUILDING OPERATIONS AS SHOWN BY PERMITS ISSUED IN PRINCIPAL CITIES OF THE UNITED STATES

[Monthly average, 1929=100]

Month	Families provided for	Indicated expenditures for—			
		New residential buildings	New nonresidential buildings	Additions, alterations, and repairs	Total building operations
1929					
November	51.7	44.8	89.6	95.2	68.1
December	35.9	30.2	74.3	66.1	51.7
1930					
November	52.9	42.5	54.4	37.8	46.3
December	45.0	37.6	64.3	53.5	50.1
1931					
November	23.8	19.0	32.7	33.6	26.2
December	14.7	11.8	32.9	27.3	22.3
1932					
November	6.4	4.9	21.8	14.9	13.0
December	5.0	3.6	17.3	13.7	10.5
1933					
November	12.1	8.6	10.3	18.3	11.0
December	6.7	4.6	13.8	23.5	11.1

The index numbers of families provided for and of new residential buildings, while lower than for November 1933, were higher than for December 1932.

The index number for new nonresidential buildings, while lower than for December 1932, was higher than for November 1933.

The index number of expenditures for additions, alterations, and repairs, and for total building operations were both higher during December 1933 than during either November 1933 or December 1932.

Construction from Public Funds

TABLE 5 shows the value of contracts awarded by the United States Government for construction projects of all kinds during November and December 1933. This includes awards for building construction; public roads; river, harbor, and flood-control projects; street paving; naval vessels; reclamation projects; forest service; water and sewerage systems; and miscellaneous projects.

Whenever a contract is awarded for a public building in a city having a population of 10,000 or over, the data are included in all the tables published in this report, but data for public construction, other than buildings, are not so included.

TABLE 5.—VALUE OF CONTRACTS AWARDED FOR ALL FEDERAL CONSTRUCTION PROJECTS BY THE UNITED STATES GOVERNMENT DURING NOVEMBER AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS [1]

Geographic division	Building construction		Public roads		River, harbor, and flood-control projects	
	November 1933	December 1933	November 1933	December 1933	November 1933	December 1933
New England	$707,107	$629,867	$2,975,681	$1,556,642	$1,337,700	$365,476
Middle Atlantic	2,483,438	2,704,835	7,114,333	5,488,775	1,511,038	800,761
East North Central	293,993	322,223	7,054,030	7,592,410	4,226,577	5,112,191
West North Central	205,804	208,642	5,709,449	6,213,545	3,803,792	3,492,675
South Atlantic	5,361,827	2,499,895	4,839,679	3,994,881	118,965	719,660
South Central	5,097,392	2,482,416	7,275,424	8,282,160	3,842,087	2,341,272
Mountain and Pacific	5,748,506	2,188,107	6,258,793	8,798,882	2,067,569	668,134
Total	19,898,067	11,035,985	41,227,389	41,927,295	16,907,728	13,500,169
Outside of continental United States	254,192	641,706	----------	----------	4,565,115	----------

Geographic division	Streets and roads [2]		Naval vessels		Reclamation projects		Forestry	
	November 1933	December 1933	November 1933	December 1933	November 1933	December 1933	November 1933	December 1933
New England	$86,002	$13,063	$266,739	$17,535	0	0	$3,476	$8,334
Middle Atlantic	146,004	46,976	1,091,955	1,106,104	0	0	0	100,690
East North Central	0	160,205	1,134,106	962,597	0	0	24,601	143,070
West North Central	172,933	35,386	0	0	$12,000	0	236,603	749
South Atlantic	536,639	541,169	1,894,264	3,076,018	10,000	0	69,219	155,928
South Central	477,454	347,912	0	0	8,000	0	130,173	400,875
Mountain and Pacific	1,283,352	2,549,485	614,650	1,510,421	562,397	$1,628,150	854,879	6,513,534
Total	2,702,384	3,694,196	5,001,714	6,672,675	[3] 596,397	1,628,150	1,318,951	7,323,180
Outside of continental United States	89,794	53,000	126,140	21,000	----------	----------	----------	84,000

[1] Subject to revision.
[2] Other than those reported by the Bureau of Public Roads.
[3] Includes $4,000 not allocated by geographic divisions.

TABLE 5.—VALUE OF CONTRACTS AWARDED FOR ALL FEDERAL CONSTRUCTION PROJECTS BY THE UNITED STATES GOVERNMENT DURING NOVEMBER AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS—Continued

Geographic division	Water and sewerage systems		Miscellaneous		Total	
	November 1933	December 1933	November 1933	December 1933	November 1933	December 1933
New England	0	$14,495	$453,470	$62,695	$5,830,175	$2,668,107
Middle Atlantic	$81,518	5,000	771,432	304,221	13,199,718	10,557,362
East North Central	0	16,722	509,574	478,657	13,242,881	14,788,075
West North Central	0	0	338,080	34,728	10,478,661	9,985,725
South Atlantic	193,113	310,738	837,942	439,249	13,861,648	11,737,538
South Central	224,308	32,543	751,649	112,564	17,806,487	13,999,742
Mountain and Pacific	224,600	52,879	803,832	950,376	18,418,578	24,859,968
Total	723,539	432,377	[4] 4,485,705	2,382,490	[5] 92,861,874	88,596,517
Outside of continental United States	20,920	22,300	374,952	181,022	5,431,113	1,003,028

[4] Includes $19,726 not allocated by geographic divisions. [5] See notes to details.

Comparing contracts awarded for Federal projects in December with those awarded during November, there was a decrease in building construction; public roads; river, harbor, and flood-control work; water and sewerage systems; and miscellaneous projects.

Increases were shown in the value of awards for public roads, street paving, naval vessels, reclamation projects, and forestry projects.

The value of contracts awarded within the continental United States for construction projects of all kinds during December totaled $88,596,517. In the outlying territories of the United States, contracts were awarded during December to cost slightly over $1,000,000. November contracts were valued at nearly $98,000,000. Decreases were shown in total construction awards in all geographic divisions except the East North Central and the Mountain and Pacific. The value of projects for which contracts were awarded in the Mountain and Pacific division increased from $18,400,000 to $24,800,000.

In each of the seven geographic divisions, road building accounted for a larger percentage of the value of awards than any other type of construction projects.

Table 6 shows the value of contracts awarded from public-works funds for all non-Federal projects, by geographic divisions.

TABLE 6.—VALUE OF CONTRACTS AWARDED FOR ALL NONFEDERAL CONSTRUCTION PROJECTS FROM PUBLIC-WORKS FUNDS DURING NOVEMBER AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS

Geographic division	Building construction		Streets and roads [1]		Water and sewerage systems	
	November 1933	December 1933	November 1933	December 1933	November 1933	December 1933
New England	$862,665	0	$128,654	$320,236	$207,828	$1,642,284
Middle Atlantic	725,664	$2,327,815	10,000	0	2,609,358	0
East North Central	2,095,051	6,343,251	4,189,607	196,816	10,521,566	2,320,547
West North Central	782,544	1,717,484	485,028	157,905	1,083,358	353,804
South Atlantic	1,758,598	561,975	[6]	0	278,227	534,253
South Central	72,515	106,720	191,547	66,822	1,258,849	192,419
Mountain and Pacific	418,355	106,127	137,441	0	682,365	315,861
Total	6,715,392	11,163,372	5,142,277	741,779	16,641,551	5,359,168

[1] Other than those reported by the Bureau of Public Roads.

TABLE 6.—VALUE OF CONTRACTS AWARDED FOR ALL NONFEDERAL CONSTRUCTION PROJECTS FROM PUBLIC-WORKS FUNDS DURING NOVEMBER AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS—Continued

Geographic division	Miscellaneous		Total	
	November 1933	December 1933	November 1933	December 1933
New England	$22,500	0	$1,221,647	$1,962,520
Middle Atlantic	0	0	3,345,022	2,327,815
East North Central	265,232	$47,907	17,071,456	8,908,521
West North Central	0	24,318	2,350,930	2,253,511
South Atlantic	0	0	2,036,825	1,096,228
South Central	796	399,400	1,523,707	765,361
Mountain and Pacific	32,518	54,508	1,270,769	476,496
Total	321,046	526,133	28,820,266	17,790,452

Non-Federal projects are contracts awarded by States, cities, counties, or in some cases private firms, funds for which are provided by the Public Works Administration. These funds may be provided either by loan and grant, or by grant only.

Contracts awarded for non-Federal public-works projects during December 1933 totaled nearly $18,000,000 as compared with more than $28,000,000 in November. The decrease was caused by a large reduction in the value of awards made for water and sewerage systems and for street and road paving. The value of awards for building construction and for miscellaneous projects increased in December as compared with November.

Street and road paving as shown in the table does not include the road work done by the Bureau of Public Roads of the United States Department of Agriculture.

Table 7 shows the value of public buildings and highway construction awards as reported by the various State governments.

TABLE 7.—VALUE OF PUBLIC BUILDING AND HIGHWAY CONSTRUCTION AWARDS AS REPORTED BY THE STATE GOVERNMENTS, BY GEOGRAPHIC DIVISIONS

Geographic division	Value of awards for public buildings			Value of awards for highway construction	
	December 1932	November 1933	December 1933	November 1933	December 1933
New England	$232,381	$141,665	$99,985	$21,844	0
Middle Atlantic	3,059,844	143,688	319,769	125,818	0
East North Central	162,539	302,116	1,780,777	566,883	$62,851
West North Central	7,365	15,440	437,482	949,419	228,883
South Atlantic	169,714	134,013	362,654	156,129	252,285
South Central	134,453	597,230	135,157	23,282	311,202
Mountain and Pacific	387,551	805,435	550,971	2,761,577	2,843,972
Total	4,153,847	2,139,587	3,686,795	4,604,952	3,699,193

Data concerning building construction awards by State governments are received direct from the State officials. Information concerning highway construction is obtained from the Bureau of Public Roads of the United States Department of Agriculture.

During December 1933, State awards for building construction totaled over $3,500,000. This was over $1,500,000 more than the value of awards made in November 1933, but was $500,000 less than the value of awards made during December 1932.

The value of contracts awarded for State highway construction during December 1933 was nearly $1,000,000 less than the value of contracts awarded during November.

Comparisons, December 1933 with December 1932

TABLE 8 shows the estimated cost of new residential buildings of new nonresidential buildings, of additions, alterations, and repairs, and of total building operations in 340 identical cities of the United States having a population of 25,000 or over for the months of December 1932 and December 1933, by geographic divisions.

TABLE 8.—ESTIMATED COST OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 340 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN DECEMBER 1932 AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings (estimated cost)			New nonresidential buildings (estimated cost)		
	December 1932	December 1933	Percent of change	December 1932	December 1933	Percent of change
New England	$616,000	$602,750	−2.2	$502,741	$360,509	−28.3
Middle Atlantic	1,430,820	4,016,750	+180.7	5,618,201	4,729,093	−15.8
East North Central	439,630	203,725	−53.7	1,468,455	2,247,578	+53.1
West North Central	214,425	188,500	−12.1	161,178	631,514	+291.8
South Atlantic	590,329	460,155	−22.1	7,556,773	3,035,993	−59.8
South Central	181,306	275,497	+52.0	683,013	1,580,292	+131.4
Mountain and Pacific	890,896	775,863	−12.9	4,748,648	2,350,922	−50.5
Total	4,363,406	6,523,240	+49.5	20,739,009	14,935,901	−28.0

Geographic division	Additions, alterations, and repairs (estimated cost)			Total construction (estimated cost)			Number of cities
	December 1932	December 1933	Percent of change	December 1932	December 1933	Percent of change	
New England	$911,573	$911,693	(1)	$2,030,314	$1,874,952	−7.7	53
Middle Atlantic	1,838,487	4,111,735	+123.6	8,887,508	12,857,578	+44.7	68
East North Central	538,025	842,443	+56.6	2,446,110	3,293,746	+34.7	92
West North Central	325,126	289,959	−10.8	700,729	1,109,973	+58.4	25
South Atlantic	802,728	1,288,754	+60.5	8,949,830	4,784,902	−46.5	37
South Central	272,248	703,242	+158.3	1,136,567	2,559,031	+125.2	29
Mountain and Pacific	798,149	1,197,461	+50.0	6,437,693	4,324,246	−32.8	36
Total	5,486,336	9,345,287	+70.3	30,588,751	30,804,428	+0.7	340

[1] Increase less than one tenth of 1 percent.

The value of the new residential buildings for which permits were issued for December 1933 was 49.5 percent greater than the value of residential buildings for which permits were issued in the same month of the previous year.

Although there was an increase of nearly 50 percent in the value of new residential buildings throughout the country, 5 of the 7

geographic divisions registered decreases. Increases occurred in only two geographic divisions.

Comparing December 1933 with the same month of the previous year, there was a decrease of 28 percent in the cost of nonresidential buildings. Three geographic divisions showed increases in indicated expenditures for this type of building, while four registered decreases.

The cost of additions, alterations, and repairs for which permits were issued during December 1933 increased 70.3 percent compared with December 1932. Increases were shown in indicated expenditures for repairs in 6 of the 7 geographic divisions.

The value of construction projects of all kinds increased seven tenths of 1 percent comparing December 1933 permits with those of the like period in the previous year. Four geographic divisions registered increases and three decreases in the valuation of total construction projects, comparing the two periods under discussion.

Table 9 shows the number of new residential buildings, of new nonresidential buildings, of additions, alterations, and repairs, and of total building construction in 340 identical cities having a population of 25,000 or over for the months of December 1932 and December 1933, by geographic divisions.

TABLE 9.—NUMBER OF NEW BUILDINGS, OF ADDITIONS, ALTERATIONS, AND REPAIRS, AND OF TOTAL BUILDING CONSTRUCTION IN 340 IDENTICAL CITIES, AS SHOWN BY PERMITS ISSUED IN NOVEMBER AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS

Geographic division	New residential buildings		New nonresidential buildings		Additions, alterations, and repairs		Total construction	
	December 1932	December 1933	December 1932	December 1933	December 1932	December 1933	December 1932	December 1933
New England	104	87	267	184	1,079	793	1,450	1,064
Middle Atlantic	199	155	614	442	2,653	2,732	3,466	3,329
East North Central	96	46	467	381	1,047	1,002	1,610	1,429
West North Central	50	42	155	163	328	398	533	603
South Atlantic	142	107	272	236	1,501	1,533	1,915	1,876
South Central	110	94	198	233	767	814	1,075	1,141
Mountain and Pacific	267	187	706	545	2,102	2,345	3,075	3,077
Total	968	718	2,679	2,184	9,477	9,617	13,124	12,519
Percent of change		−25.8		−18.5		+1.5		−4.6

Comparing December 1933 with December 1932, there was a decrease of 25.8 percent in the number of new residential buildings, a decrease of 18.5 percent in the number of new nonresidential buildings, an increase of 1.5 percent in the number of additions, alterations, and repairs made to existing buildings, and a decrease of 4.6 percent in the total number of buildings for which permits were issued.

Table 10 shows the number of families provided for in the different kinds of housekeeping dwellings, together with the estimated cost of such dwellings, for which permits were issued in 340 identical cities during December 1932 and December 1933, by geographic divisions.

TABLE 10.—ESTIMATED COST OF AND NUMBER OF FAMILIES PROVIDED FOR IN DIFFERENT KINDS OF HOUSEKEEPING DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 340 IDENTICAL CITIES IN DECEMBER 1932 AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS

Geographic division	1-family dwellings				2-family dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	December 1932	December 1933	December 1932	December 1933	December 1932	December 1933	December 1932	December 1933
New England	$601,000	$550,750	102	79	$15,000	$38,500	4	12
Middle Atlantic	845,270	655,250	172	119	133,800	140,000	40	44
East North Central	389,630	180,475	95	42	0	14,250	0	5
West North Central	164,425	188,500	49	42	0	0	0	0
South Atlantic	559,329	430,155	135	106	14,500	0	5	0
South Central	174,056	232,297	108	84	7,250	38,500	4	17
Mountain and Pacific	721,746	627,483	242	171	79,850	48,380	34	19
Total	3,455,456	2,864,910	903	643	250,400	279,630	87	97
Percent of change		−17.1		−28.8		+11.7		+11.5

Geographic division	Multifamily dwellings				Total, all kinds of housekeeping dwellings			
	Estimated cost		Families provided for		Estimated cost		Families provided for	
	December 1932	December 1933	December 1932	December 1933	December 1932	December 1933	December 1932	December 1933
New England	0	$13,500	0	6	$616,000	$602,750	106	97
Middle Atlantic	$451,750	3,221,500	146	1,194	1,430,820	4,016,750	358	1,357
East North Central	0	9,000	0	4	389,630	203,725	95	51
West North Central	0	0	0	0	164,425	188,500	49	42
South Atlantic	10,500	30,000	14	15	584,329	460,155	154	121
South Central	0	4,700	0	3	181,306	275,497	112	104
Mountain and Pacific	89,300	100,000	52	40	890,896	775,863	328	230
Total	551,550	3,378,700	212	1,262	4,257,406	6,523,240	1,202	2,002
Percent of change		+512.6		+495.3		+53.2		+66.6

The value of the one-family dwellings for which permits were issued during December 1933 decreased 17.1 percent as compared with the value of one-family dwellings for which permits were issued during December of the previous year. The number of family-dwelling units provided in this type of dwelling decreased 28.8 percent.

The estimated cost of two-family dwellings increased 11.7 percent and the number of families provided for in duplex houses increased 11.5 percent, comparing December 1933 with December of the previous year.

The apartment houses for which permits were issued for December of this year were to cost in excess of 500 percent more than apartment houses for which permits were issued in December of last year.

There was an increase of 53.2 percent in the estimated cost of housekeeping dwellings of all kinds comparing the two periods under

discussion. The total number of families provided for, however, increased 16.6 percent.

Details by Cities

TABLE 11 shows the estimated expenditures for new residential buildings, for new nonresidential buildings, and for total building operations, together with the number of families provided for in new dwellings, in each of the cities of the United States having a population of 10,000 or over from which reports were received for December 1933.

Permits were issued for December for the following important building projects: In the Borough of Manhattan, for an office building to cost $350,000; in the Borough of Queens, for apartment houses to cost $3,000,000, and for a school building to cost over $1,300,000; in Wilmington, Del., for a school building to cost over $1,300,000; in Minneapolis, Minn., for a school building to cost over $200,000; and in Peoria, Ill., for a distillery to cost over $1,000,000. Contracts were awarded by the Federal Government for a veterans' hospital in Roanoke, Va., to cost nearly $1,200,000; for shops and barracks in the navy yard at Bremerton, Wash., to cost nearly $1,000,000; and for an airplane hangar in Shreveport, La., to cost over $300,000.

TABLE 11.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, DECEMBER 1933

New England States

City and State	New residential buildings	Families provided for	New nonresidential buildings	Total (including repairs)
Connecticut:				
Ansonia	0	0	0	0
Bridgeport	$17,000	5	$1,480	$21,781
Bristol	20,000	1	1,990	23,117
Danbury	0	0	0	0
Derby	0	0	0	250
East Hartford	0	0	50	5,699
Fairfield	14,600	4	0	27,200
Greenwich	55,500	7	3,000	79,200
Hamden	3,800	1	950	6,750
Hartford	0	0	30,200	70,170
Manchester	5,000	1	1,750	6,950
Meriden	13,350	4	1,770	22,605
Middletown	800	1	7,715	9,390
Milford	0	0	175	4,807
Naugatuck	0	0	300	300
New Britain	4,000	1	3,800	19,206
New Haven	0	0	5,455	16,805
Norwalk	37,800	3	150	43,910
Norwich	24,000	4	550	25,805
Shelton	1,500	1	75	1,625
Stamford	6,500	2	27,800	48,001
Stratford	800	1	1,256	2,856
Torrington	0	0	435	815
Wallingford	0	0	145	725
Waterbury	19,500	2	450	21,400
West Hartford	29,500	5	2,275	51,687
Willimantic	0	0	475	475
Maine:				
Biddeford	0	0	$1,500	$2,200
Portland	0	0	1,300	61,555
South Portland	0	0	715	715
Westbrook	0	0	400	3,900
Massachusetts:				
Arlington	$13,000	2	1,400	17,900
Attleboro	6,000	1	465	7,185
Belmont	8,000	1	1,000	9,000
Beverly	0	0	7,625	61,389
Boston [1]	81,000	17	30,785	318,374
Braintree	0	0	1,625	6,275
Brockton	4,000	1	450	8,325
Brookline	42,000	4	850	50,310
Cambridge	3,500	1	350	20,705
Chelsea	0	0	10,000	40,060
Chicopee	0	0	4,350	4,950
Dedham	0	0	1,250	2,350
Easthampton	0	0	50	2,750
Everett	0	0	0	29,600
Fall River	0	0	15	2,815
Fitchburg	0	0	300	300
Framingham	0	0	72,500	73,270
Gardner	0	0	155	905
Gloucester	16,500	4	100	22,988
Haverhill	0	0	350	11,350
Holyoke	0	0	0	30,500
Lawrence	0	0	148	998
Leominster	2,200	1	10,088	27,849

[1] Applications filed.

TABLE 11.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, DECEMBER 1933—Continued

New England States—Continued

City and State	New residential buildings	Families provided for	New nonresidential buildings	Total (including repairs)
Massachusetts—Con.				
Lowell	$2,000	1	$750	$4,800
Lynn	0	0	1,100	56,650
Malden	4,500	1	0	10,155
Marlborough	0	0	200	3,800
Medford	0	0	2,000	20,750
Melrose	$4,000	1	$100	$6,600
Milton	17,800	5	350	28,879
Natick	9,000	2	1,850	10,850
Needham	5,000	1	400	5,800
New Bedford	0	0	2,600	5,600
Newburyport	0	0	600	600
Newton	123,000	12	16,000	152,785
North Adams	0	0	0	17,620
Northampton	0	0	50	450
North Attleboro	0	0	0	0
Norwood	0	0	8,250	21,688
Peabody	0	0	12,150	12,500
Pittsfield	10,000	1	0	10,825
Plymouth	0	0	450	1,625
Quincy	16,500	3	2,520	24,621
Revere	0	0	0	1,300
Salem	0	0	130,000	159,600
Saugus	2,000	1	0	2,500
Somerville	0	0	200	3,730
Springfield	0	0	1,500	25,950
Stoneham	0	0	0	400
Swampscott	0	0	25	50
Taunton	0	0	196	946
Waltham	4,600	1	125	7,510
Watertown	0	0	100	14,040
Wellesley	48,500	6	12,000	68,400
Westfield	0	0	0	0
Massachusetts—Con.				
West Springfield	0	0	0	$140
Weymouth	$2,250	2	$15,727	24,252
Winchester	11,000	1	650	12,850
Winthrop	0	0	100	400
Woburn	4,500	1	151,700	156,200
Worcester	54,400	12	13,060	75,366
New Hampshire:				
Berlin	0	0	0	200
Concord	2,000	1	500	2,750
Keene	5,000	2	6,700	13,190
Manchester	18,000	6	1,050	23,490
Rhode Island:				
Central Falls	0	0	0	4,350
Cranston	10,500	2	2,915	13,620
East Providence	0	0	8,015	12,613
Newport	4,600	1	5,400	82,269
North Providence	3,000	1	250	3,650
Pawtucket	0	0	250	2,480
Providence	6,000	1	10,450	49,600
Warwick	20,500	2	1,900	23,900
Westerly	950	1	3,500	5,525
West Warwick	0	0	2,500	2,500
Woonsocket	0	0	50	3,742
Vermont:				
Bennington	0	0	0	0
Burlington	0	0	25,000	27,800
Rutland	0	0	150	1,650
Total	819,450	143	683,400	2,553,390

Middle Atlantic States

New Jersey:				
Asbury Park[1]	0	0	0	$5,620
Atlantic City	0	0	$106,460	116,013
Bayonne	$5,000	2	0	11,250
Bloomfield	0	0	400	2,000
Bridgeton	0	0	0	0
Burlington	0	0	0	1,235
Camden	0	0	8,625	10,385
Cartaret	0	0	65,000	80,000
Clifton	4,000	1	2,630	7,630
Dover	0	0	6,050	7,085
East Orange	10,000	2	8,895	32,418
Elizabeth	11,900	1	500	16,345
Englewood	0	0	0	2,750
Garfield	4,900	1	0	6,900
Hackensack	0	0	0	2,405
Harrison	0	0	13,000	15,175
Hillside Twp.	0	0	5,850	6,025
Hoboken	0	0	0	4,937
Irvington	4,500	1	550	5,780
Jersey City	0	0	2,500	35,360
Kearny	0	0	900	1,050
Long Branch	0	0	250	3,860
Lyndhurst Twp.	0	0	450	800
Maplewood Twp.	16,000	2	1,225	21,715
Montclair	14,000	3	0	15,110
Morristown	0	0	0	215
Newark	0	0	19,450	81,326
New Brunswick	0	0	0	16,385
Nutley	5,000	1	520	5,520
New Jersey—Continued.				
Orange	0	0	$6,800	$11,610
Passaic	0	0	0	6,165
Paterson	0	0	39,300	46,201
Perth Amboy	0	0	100	500
Phillipsburg	0	0	0	0
Plainfield	0	0	9,175	11,725
Pleasantville	0	0	0	150
Red Bank	0	0	0	4,500
Ridgefield Park	0	0	0	770
Ridgewood	$6,500	1	0	9,600
Roselle	0	0	200	700
Rutherford	0	0	0	200
South Orange	6,000	1	0	7,700
Summit	0	0	200	685
Teaneck Twp.	7,000	1	1,785	10,582
Trenton	0	0	16,694	31,375
Union City	0	0	750	4,330
Union Twp.	18,600	2	0	18,650
Weehawken Twp.	0	0	0	865
Westfield	17,200	3	700	18,200
West New York	12,000	5	6,200	67,990
West Orange	23,000	4	700	24,505
New York:				
Albany	31,000	4	300	78,667
Amsterdam	0	0	2,100	2,100
Auburn	0	0	100	11,600
Batavia	0	0	325	525
Binghamton	6,000	2	780	26,651

[1] Not included in totals.

TABLE 11.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, DECEMBER 1933—Continued

Middle Atlantic States—Continued

City and State	New residential buildings	Families provided for	New nonresidential buildings	Total (including repairs)
New York—Continued.				
Buffalo	$14,000	6	$25,510	$153,707
Cohoes	0	0	0	75
Dunkirk	0	0	0	40
Elmira	0	0	6,150	63,160
Endicott	0	0	4,600	4,750
Floral Park	0	0	500	500
Fulton	1,200	1	500	1,700
Glen Cove	0	0	2,713	4,163
Glens Falls	0	0	950	7,250
Hempstead	16,500	4	0	16,500
Herkimer	0	0	0	0
Hornell	0	0	0	0
Irondequoit	4,800	1	980	5,930
Ithaca	14,000	2	3,150	17,150
Jamestown	0	0	0	6,780
Johnson City	3,800	2	0	3,800
Kenmore	0	0	75	75
Kingston	0	0		42,335
Lackawanna	0	0	0	0
Lockport	0	0	38,000	38,060
Lynbrook	3,500	1	0	3,500
Mamaroneck	0	0	6,050	8,150
Middletown	0	0	0	1,185
Mount Vernon	36,000	5	750	47,750
Newburgh	11,500	2	2,900	15,000
New Rochelle	0	0	800	8,100
New York City:				
The Bronx [1]	196,000	61	27,300	396,185
Brooklyn [1]	278,500	83	568,640	1,880,771
Manhattan [1]	0	0	1,327,612	2,745,162
Queens [1]	3,164,000	138	1,713,068	5,027,103
Richmond [1]	0	0	70,250	99,505
Niagara Falls	14,500	2	2,077	25,012
North Tonawanda [2]	1,400	1	325	1,725
Ogdensburg	0	0	500	1,200
Olean	0	0	0	0
Oneida	0	0	0	600
Ossining	0	0	6,300	6,300
Oswego	0	0	0	8,000
Peekskill	3,500	1	16,600	21,100
Plattsburg	6,000	2	0	6,000
Port Jervis	0	0	0	0
Poughkeepsie	0	0	200	9,419
Rensselaer	0	0	0	6,045
Rochester	3,900	1	71,278	97,489
Rockville Center	10,000	2	0	11,270
Saratoga Springs	2,800	1	0	4,794
Schenectady	0	0	17,000	27,423
Syracuse	26,450	5	775	32,150
Tonawanda	0	0	210	2,710
Troy	23,500	3	500	28,905
Utica	13,000	2	6,200	19,200
Valley Stream	0	0	530	880
Watertown	0	0	1,150	10,495
White Plains	12,000	2	3,000	17,150
Yonkers	39,300	5	28,250	79,100
Pennsylvania:				
Abington Twp	0	0	950	4,100
Allentown	0	0	175	4,525
Altoona	0	0	650	1,350
Ambridge	0	0	0	0
Arnold	0	0	0	0
Pennsylvania—Continued.				
Bethlehem	0	0	$3,600	$3,850
Braddock	0	0	0	800
Bradford	0	0	1,400	5,535
Bristol	0	0	200	200
Carlisle	0	0	0	0
Chambersburg	0	0	250	250
Charleroi	0	0	0	0
Chester	0	0	750	1,750
Clairton	0	0	1,775	2,775
Coatesville	0	0	200	750
Connellsville	0	0	0	0
Coraopolis	0	0	0	0
Donora	0	0	0	0
Du Bois	0	0	0	0
Duquesne	0	0	500	500
Easton	0	0	500	1,398
Erie	0	0	60,836	73,711
Greensburg	0	0	0	0
Harrisburg	0	0	0	16,970
Haverford	0	0	250	2,850
Hazleton	$3,000	1	3,000	6,000
Jeannette	0	0	0	3,000
Johnstown	0	0	11,000	11,690
Kingston	0	0	200	1,200
Lancaster	0	0	7,000	7,550
Latrobe	0	0	0	0
Lower Merion Twp	24,600	2	1,800	30,076
McKeesport	0	0	0	4,350
McKees Rocks	0	0	0	0
Meadville	0	0	2,600	8,150
Monessen	3,500	1	0	3,540
Mount Lebanon Twp	5,000	1	0	5,000
New Castle	3,800	1	465	13,565
New Kensington	0	0	7,400	7,400
Norristown	0	0	25,375	65,355
North Braddock	0	0	0	0
Oil City	0	0	0	3,135
Philadelphia	15,600	4	82,147	564,342
Phoenixville	0	0	0	0
Pittsburgh	19,700	5	14,245	108,415
Pittston	0	0	0	0
Plymouth	0	0	0	3,500
Pottstown	0	0	500	1,975
Pottsville	0	0	950	1,750
Scranton	6,500	2	25,231	35,836
Sharon	6,000	1	0	6,200
Steelton	0	0	0	0
Sunbury	0	0	0	0
Swissvale	0	0	0	0
Uniontown	0	0	59,114	59,364
Upper Darby	12,000	2	8,450	21,750
Vandergrift	0	0	0	0
Warren	0	0	0	1,000
Washington	0	0	0	0
Waynesboro	0	0	0	0
West Chester	0	0	8,800	9,100
Wilkes-Barre	0	0	2,975	5,404
Wilkinsburg	7,000	2	475	7,600
Williamsport	0	0	345,150	351,113
York	2,200	1	200	14,130
Total	4,210,250	392	4,963,645	13,402,652

[1] Applications filed.

[2] Not included in totals.

TABLE 11.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, DECEMBER 1933—Continued

East North Central States

City and State	New residential buildings	Families provided for	New nonresidential buildings	Total (including repairs)
Illinois:				
Alton	0	0	$280	$2,505
Aurora	0	0	7,500	8,590
Belleville	0	0	0	0
Berwyn	0	0	0	0
Bloomington	0	0	0	0
Blue Island	0	0	1,800	8,860
Brookfield	0	0	0	580
Cairo	0	0	0	0
Calumet City	0	0	0	0
Canton	0	0	75	75
Centralia	0	0	0	0
Champaign	0	0	2,000	3,700
Chicago	$20,500	4	75,645	242,870
Chicago Heights	0	0	0	1,150
Cicero	0	0	2,600	4,975
Danville	0	0	44,800	50,898
Decatur	1,000	1	25,000	26,000
East St. Louis	3,250	2	913	12,213
Elgin	0	0	240	10,559
Elmhurst	0	0	0	0
Elmwood Park	0	0	250	250
Evanston	4,000	1	750	33,250
Forest Park	0	0	600	600
Freeport	4,300	2	0	4,300
Granite City	0	0	0	0
Harvey	0	0	400	400
Highland Park	35,600	2	9,550	47,550
Joliet	0	0	0	7,000
Kankakee	0	0	0	0
La Grange	0	0	0	0
Maywood	0	0	0	1,200
Melrose Park	0	0	0	0
Moline	2,000	1	0	2,875
Mount Vernon	0	0	0	450
Oak Park	0	0	610	2,235
Ottawa	0	0	0	2,000
Park Ridge	0	0	200	200
Peoria	5,000	2	1,060,300	1,079,350
Quincy	2,500	1	2,650	5,425
Rockford	0	0	125	7,135
Rock Island	500	1	0	2,329
Springfield	0	0	19,150	24,450
Sterling	0	0	1,100	1,250
Streator	0	0	0	0
Urbana	0	0	0	0
Waukegan	0	0	1,400	12,500
Wilmette	0	0	600	1,030
Winnetka	0	0	0	3,400
Indiana:				
Bedford	0	0	0	300
Connersville	0	0	0	0
Crawfordsville	0	0	0	33
East Chicago	0	0	136,900	137,025
Elkhart	0	0	50	614
Elwood	0	0	0	0
Evansville	0	0	1,600	16,746
Fort Wayne	0	0	7,475	59,165
Frankfort	0	0	0	300
Gary	0	0	100	665
Hammond	9,000	4	350	10,350
Huntington	0	0	0	150
Indianapolis	8,600	2	83,885	114,632
Kokomo	0	0	395	1,525
Lafayette	0	0	0	500
La Porte	0	0	1,700	1,730
Logansport	0	0	11,975	12,280
Marion	0	0	0	650
Michigan City	0	0	50	2,245
Indiana—Con.				
Mishawaka	0	0	$3,000	$3,650
Muncie	0	0	240	1,175
Newcastle	0	0	0	0
Peru	0	0	0	0
Richmond	0	0	0	2,600
South Bend	0	0	0	4,500
Terre Haute	0	0	2,080	15,785
Vincennes	0	0	0	182
Whiting	0	0	0	0
Michigan:				
Adrian	0	0	200	644
Ann Arbor	0	0	50	10,548
Battle Creek	0	0	12,200	14,450
Bay City	$1,500	1	200	4,485
Benton Harbor	0	0	5,095	5,695
Dearborn	0	0	155	2,255
Detroit	27,800	6	148,780	319,086
Escanaba	1,350	2	0	1,350
Ferndale	0	0	0	0
Flint	0	0	39,712	44,342
Grand Rapids	0	0	500	15,115
Grosse Pointe Park	0	0	0	0
Hamtramck	0	0	0	475
Highland Park	0	0	0	8,950
Holland	0	0	7,540	7,590
Ironwood	0	0	0	200
Jackson	0	0	150	4,150
Kalamazoo	4,500	1	125	6,255
Lansing	0	0	2,400	3,007
Lincoln Park	0	0	135	1,535
Marquette	0	0	0	365
Monroe	0	0	0	1,600
Muskegon	0	0	0	175
Owosso	0	0	0	0
Pontiac	0	0	2,000	3,575
River Rouge	0	0	0	5,565
Royal Oak	0	0	0	0
Saginaw	0	0	2,660	5,810
Sault Sainte Marie	0	0	150	525
Traverse City	0	0	400	400
Wyandotte	3,950	1	460	6,210
Ypsilanti	0	0	0	0
Ohio:				
Akron	12,525	2	5,620	31,106
Alliance	0	0	3,900	7,900
Barberton	0	0	10,000	10,900
Bellaire	0	0	0	0
Bucyrus	0	0	0	0
Cambridge	0	0	0	0
Campbell	0	0	0	0
Canton	0	0	1,710	5,955
Cincinnati	66,200	13	56,320	176,295
Cleveland	18,500	4	15,525	55,000
Cleveland Heights	0	0	3,700	4,980
Columbus	4,500	1	193,600	212,000
Cuyahoga Falls	0	0	0	500
Dayton	0	0	1,048	2,523
East Cleveland	0	0	170	325
Elyria	0	0	2,130	2,705
Euclid	13,442	3	0	13,442
Findlay	0	0	0	500
Fostoria	0	0	0	200
Garfield Heights	0	0	0	0
Hamilton	0	0	150	250
Ironton	0	0	0	1,250

TABLE 11.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, DECEMBER 1933—Continued

East North Central States—Continued

City and State	New residential buildings	Families provided for	New nonresidential buildings	Total (including repairs)
Ohio—Contd.				
Lakewood	0	0	$650	$2,475
Lima	0	0	55	55
Lorain	0	0	95	95
Mansfield	0	0	2,580	3,074
Marietta	0	0	0	0
Marion	0	0	0	0
Massillon	0	0	0	10
Middletown	0	0	0	8,940
Newark	0	0	125	125
Norwood	0	0	40,250	40,750
Parma	0	0	0	0
Piqua	0	0	0	200
Portsmouth	0	0	300	4,820
Salem	0	0	0	0
Sandusky	0	0	75	625
Shaker H'ts	$25,000	2	0	25,000
Springfield	0	0	250	500
Steubenville	5,500	2	300	5,950
Struthers	0	0	0	0
Tiffin	0	0	0	0
Toledo	0	0	1,175	8,774
Warren	2,400	1	217,350	234,890
Wooster	0	0	75	75
Xenia	0	0	0	0
Youngstown	0	0	640	12,190
Wisconsin:				
Beloit	0	0	0	$375
Eau Claire	0	0	$10,000	12,500
Fond du Lac	0	0	3,330	3,715
Green Bay	0	0	495	945
Janesville	$7,500	2	100	7,600
Kenosha	0	0	325	2,515
Madison	0	0	550	2,050
Manitowoc	0	0	0	40
Marinette	0	0	0	2,000
Milwaukee	0	0	134,595	223,429
Oshkosh	0	0	975	1,100
Racine	0	0	0	2,750
Sheboygan	0	0	535	6,526
Shorewood	0	0	0	0
South Milwaukee	0	0	0	0
Stevens Point	0	0	300	800
Superior	0	0	40	275
Two Rivers [3]	0	0	260	1,210
Waukesha	0	0	20,300	49,350
Wausau	0	0	0	0
Wauwatosa	10,900	2	0	11,300
West Allis	0	0	110	680
Total	301,817	66	2,460,698	3,676,042

West North Central States

City and State	New residential buildings	Families provided for	New nonresidential buildings	Total (including repairs)
Iowa:				
Burlington	$2,500	1	$100	$5,806
Cedar Rapids	2,000	1	3,590	12,583
Council Bluffs	2,600	1	149	7,169
Davenport	0	0	4,400	8,104
Des Moines	5,250	2	4,560	49,450
Dubuque	5,500	1	1,300	7,783
Fort Dodge	0	0	950	1,470
Iowa City	0	0	160,000	177,000
Keokuk	0	0	0	200
Marshalltown	1,600	1	0	6,700
Mason City	4,250	4	10,231	14,946
Muscatine	3,500	1	315	11,636
Ottumwa	20,000	3	3,500	24,350
Sioux City	0	0	5,800	9,235
Waterloo	0	0	455	5,820
Kansas:				
Arkansas City	0	0	180	380
Atchison	0	0	550	550
Dodge City	0	0	250	250
Eldorado	0	0	0	155
Emporia	1,000	1	0	16,285
Fort Scott	0	0	0	0
Hutchinson	0	0	25	425
Independence	0	0	0	0
Kansas City	0	0	1,000	5,000
Lawrence	0	0	0	0
Leavenworth	9,500	3	0	9,500
Manhattan	0	0	0	0
Newton	0	0	0	561
Pittsburg	0	0	0	575
Salina	0	0	175	575
Topeka	4,000	1	400	5,550
Wichita	750	1	140,940	145,521
Minnesota:				
Albert Lea	2,750	1	500	3,250
Duluth	850	1	3,775	17,740
Faribault	0	0	0	3,110
Hibbing	0	0	0	1,200
Mankato	0	0	0	525
Minnesota—Continued.				
Minneapolis	$26,600	5	$254,994	$300,234
Rochester	3,000	1	0	3,000
St. Paul	62,100	6	28,536	137,654
South St. Paul	0	0	0	0
Winona	1,500	1	0	4,800
Missouri:				
Cape Girardeau	0	0	885	3,053
Columbia	0	0	0	0
Hannibal	0	0	0	0
Independence	0	0	0	1,500
Jefferson City	0	0	800	14,525
Joplin	2,600	2	5,500	10,050
Kansas City	22,500	6	51,200	86,200
Maplewood	0	0	1,010	1,310
Moberly	7,000	1	200	21,200
St. Charles	0	0	0	800
St. Joseph	2,500	1	60	6,160
St. Louis	18,750	6	34,735	115,173
Springfield	1,500	1	300	7,300
Nebraska:				
Beatrice	0	0	0	100
Fremont	0	0	335	785
Hastings	0	0	0	0
Lincoln	0	0	60	11,944
Omaha	8,500	3	2,010	37,090
North Dakota:				
Bismarck	0	0	0	0
Fargo	0	0	0	2,700
Grand Forks	500	1	300	800
South Dakota:				
Aberdeen	0	0	0	375
Mitchell	0	0	0	0
Rapid City	0	0	374	374
Sioux Falls	0	0	84,125	90,932
Total	223,100	57	808,569	1,411,465

[3] Not included in totals.

TABLE 11.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, DECEMBER 1933—Continued

South Atlantic States

City and State	New residential buildings	Families provided for	New nonresidential buildings	Total (including repairs)
Delaware:				
Wilmington	$42,955	9	$1,358,656	$1,410,245
District of Columbia:				
Washington	238,800	39	21,390	540,489
Florida:				
Gainesville	500	1	70	1,755
Jacksonville	6,850	6	20,065	84,835
Key West	2,500	1	30,802	53,302
Lakeland	0	0	0	300
Miami	27,600	7	73,855	401,079
Pensacola	0	0	3,400	94,434
St. Augustine	0	0	0	2,630
St. Petersburg	1,900	3	45,722	72,567
Sanford	0	0	300	775
Tallahassee	0	0	410	1,245
Tampa	1,300	2	3,100	43,963
West Palm Beach	0	0	7,252	10,458
Georgia:				
Athens	1,500	1	0	3,957
Atlanta	5,250	3	3,340	33,832
Augusta	4,800	1	165,697	183,389
Brunswick	0	0	0	1,350
Columbus	0	0	225	17,377
Lagrange	0	0	400	400
Savannah	0	0	10,230	12,073
Maryland:				
Annapolis	0	0	175,000	186,051
Baltimore	34,000	23	62,300	285,100
Cumberland	0	0	200	400
Frederick	0	0	235	525
Hagerstown	0	0	1,250	28,800
Salisbury	0	0	10,250	10,525
North Carolina:				
Asheville	900	1	80	18,420
Charlotte	13,950	3	4,970	20,555
Concord	9,124	3	0	9,399
Durham	14,450	3	3,000	27,950
Elizabeth City	950	1	0	2,950
Fayetteville	0	0	0	1,525
Gastonia	5,000	1	50	5,050
Goldsboro	0	0	100	500
Greensboro	10,000	1	95	31,231
High Point	0	0	10,200	23,414
Kinston	0	0	0	300
New Bern	0	0	0	700
North Carolina—Con.				
Raleigh	$11,000	4	$300	$12,700
Rocky Mount	700	1	10,090	11,590
Salisbury	0	0	10,235	10,235
Shelby	0	0	0	0
Statesville	0	0	0	0
Thomasville	0	0	50	50
Wilmington	1,000	1	0	3,907
Winston-Salem	2,000	1	455	5,050
South Carolina:				
Anderson	36,050	7	9,000	47,600
Charleston	5,300	3	0	10,073
Columbia	1,200	1	170	3,359
Florence	1,000	1	600	4,600
Greenville	500	1	135	4,060
Greenwood	0	0	341	3,016
Rock Hill	4,800	3	600	5,875
Spartanburg	0	0	350	1,975
Sumter	3,700	2	0	3,700
Virginia:				
Alexandria	6,250	2	0	9,265
Charlottesville	1,000	1	0	13,100
Danville	0	0	300	1,200
Hopewell	0	0	0	339
Newport News	10,000	1	2,445	14,450
Norfolk	11,400	3	10,350	52,163
Petersburg	0	0	500	900
Richmond	14,000	4	6,370	43,576
Roanoke	0	0	1,204,831	1,222,743
Staunton	0	0	2,085	12,110
Suffolk	0	0	60	260
Winchester	0	0	0	3,200
West Virginia:				
Bluefield	0	0	90	108
Charleston	1,000	1	580	47,330
Clarksburg	0	0	530	530
Fairmont	0	0	0	0
Huntington	0	0	1,950	2,000
Martinsburg	0	0	0	1,000
Morgantown	0	0	0	1,090
Parkersburg	0	0	12,000	15,000
Wheeling	0	0	0	4,475
Total	533,229	146	3,287,061	5,196,479

South Central States

City and State	New residential buildings	Families provided for	New nonresidential buildings	Total (including repairs)
Alabama:				
Bessemer	0	0	$840	$1,590
Birmingham	$7,900	3	39,648	83,135
Decatur	0	0	1,230	1,230
Gadsden	0	0	0	0
Huntsville	0	0	125	125
Mobile	3,000	2	75,900	86,060
Montgomery	0	0	9,997	22,637
Selma	0	0	450	1,336
Tuscaloosa	0	0	0	0
Arkansas:				
Blytheville	1,000	1	0	1,000
El Dorado	0	0	0	0
Fort Smith	0	0	400	4,100
Hot Springs	0	0	100	100
Little Rock	0	0	627	6,280
Texarkana	1,200	1	0	6,700
Kentucky:				
Ashland	0	0	4,000	4,000
Frankfort	0	0	0	0
Henderson	0	0	0	0
Lexington	0	0	$1,550	$3,726
Kentucky—Continued.				
Louisville	$13,000	3	$17,925	$47,104
Newport	0	0	300	300
Queensboro	0	0	49,305	50,050
Paducah	500	1	0	500
Louisiana:				
Alexandria	0	0	300	3,193
Lafayette	1,535	3	450	2,235
New Orleans	7,050	5	1,425	73,623
Shreveport	0	0	476,647	488,705
Mississippi:				
Clarksdale	2,850	1	0	3,975
Columbus	0	0	0	0
Greenville	0	0	0	1,810
Greenwood	0	0	0	0
Gulfport	0	0	2,550	2,550
Hattiesburg	0	0	1,400	1,400
Jackson	0	0	1,915	4,375
Laurel	0	0	3,500	3,500
Vicksburg	0	0	1,578	2,328

TABLE 11.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, DECEMBER 1933—Continued

South Central States—Continued

City and State	New residential buildings	Families provided for	New nonresidential buildings	Total (including repairs)
Oklahoma:				
Ada	$1,000	1	0	$1,000
Ardmore	0	0	$300	5,300
Chickasha	0	0	3,000	5,861
Enid	0	0	0	1,985
Oklahoma City	5,000	1	191,225	206,435
Okmulgee	0	0	1,625	1,625
Sapulpa	0	0	0	0
Shawnee	0	0	49,450	51,690
Tulsa	44,500	4	31,128	105,963
Tennessee:				
Chattanooga	0	0	10,812	277,024
Jackson	800	1	2,000	3,500
Johnson City	0	0	300	300
Kingsport	2,700	2	170	2,870
Knoxville	9,000	1	18,407	53,305
Nashville	8,500	5	118	31,384
Texas:				
Amarillo	0	0	0	4,521
Austin	16,994	6	4,850	31,485
Beaumont	0	0	74,234	89,506
Big Spring	0	0	0	700
Brownwood	0	0	0	0
Cleburne	0	0	0	0
Texas—Contd.				
Corpus Christi	0	0	$3,000	$5,200
Corsicana	$1,100	2	0	1,700
Dallas	47,528	22	14,683	96,733
Del Rio	2,500	2	0	2,500
Denison	0	0	0	900
El Paso	0	0	41,445	72,520
Fort Worth	4,000	2	50,609	70,589
Galveston	16,600	5	27,216	63,080
Harlingen	0	0	5,100	92,957
Houston	84,975	33	170,615	260,405
Lubbock	0	0	9,200	10,762
Palestine	14,300	8	60	16,165
Pampa	1,000	1	5,500	8,250
Paris	0	0	0	2,450
San Antonio	6,950	11	309,991	365,376
Sweetwater	0	0	370	3,870
Temple	4,870	5	0	4,870
Tyler	5,750	6	2,333	13,656
Waco	0	0	7,725	10,475
Wichita Falls	0	0	1,000	1,500
Total	316,102	138	1,728,628	2,886,079

Mountain and Pacific States

Arizona:				
Phoenix	0	0	$7,873	$12,310
Tucson	0	0	230	19,957
California:				
Alameda	0	0	600	3,307
Alhambra	$3,200	2	2,930	8,355
Anaheim	0	0	0	2,386
Bakersfield	0	0	21,690	28,907
Berkeley	2,800	1	5,200	23,510
Beverly Hills	40,000	6	3,400	52,483
Brawley	0	0	350	725
Burbank	0	0	1,150	4,750
Burlingame	9,113	2	0	9,663
Compton	0	0	100	2,348
Eureka	0	0	13,230	16,685
Fresno	0	0	7,750	32,192
Gardena	0	0	195	5,890
Glendale	43,500	10	5,840	50,830
Huntington Park	2,745	2	2,670	12,160
Inglewood	1,500	1	21,000	24,675
Long Beach	17,300	6	12,175	321,705
Los Angeles	493,185	143	244,461	959,895
Modesto	0	0	425	1,620
Monrovia	2,850	1	790	6,554
Oakland	34,080	12	23,255	106,570
Ontario	0	0	1,570	3,045
Palo Alto	18,500	4	850	20,800
Pasadena	6,800	1	18,857	44,305
Pomona	0	0	8,088	17,045
Redlands	0	0	0	4,136
Richmond	0	0	2,035	2,798
Riverside	1,800	2	144,800	154,631
Sacramento	6,000	2	1,500	26,980
Salinas	500	1	34,270	36,525
San Bernardino	0	0	190	6,261
San Diego	33,900	12	61,650	123,638
San Francisco	31,980	12	1,511,222	1,683,887
San Leandro	3,200	2	231	4,821
California—Con.				
San Jose	0	0	$17,270	$27,045
San Mateo	$2,000	1	42,280	51,130
Santa Ana	0	0	0	18,094
Santa Cruz	3,685	3	500	7,115
Santa Monica	3,300	1	34,000	67,532
Santa Rosa	0	0	775	1,330
South Gate	0	0	2,000	6,473
South Pasadena	0	0	0	2,567
Stockton	0	0	39,755	51,747
Vallejo	8,050	3	215	13,095
Whittier	3,500	1	1,250	7,613
Colorado:				
Boulder	0	0	0	530
Colorado Springs	0	0	170	1,115
Denver	31,000	4	5,015	72,736
Fort Collins	0	0	0	1,041
Greeley	0	0	700	700
Pueblo	0	0	30	26,143
Idaho:				
Boise	800	1	3,550	11,194
Pocatello	0	0	0	4,018
Montana:				
Anaconda	0	0	0	0
Billings	4,000	1	0	4,275
Great Falls	0	0	0	8,500
Missoula	1,000	1	325	1,325
Nevada:				
Reno	0	0	325	4,375
New Mexico:				
Albuquerque	0	0	15,690	20,391
Oregon:				
Astoria	0	0	0	6,225
Eugene	0	0	195	1,370
Klamath Falls	0	0	450	4,205
Medford	0	0	1,000	1,730
Portland	22,250	6	3,210	69,575
Salem	2,260	1	105	8,861

TABLE 11.—ESTIMATED COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN PRINCIPAL CITIES, DECEMBER 1933—Continued

Mountain and Pacific States—Continued

City and State	New residential buildings	Families provided for	New nonresidential buildings	Total (including repairs)
Utah:				
Ogden	0	0	$400	$400
Provo [1]	0	0	495	495
Salt Lake City	$25,843	6	4,184	45,740
Washington:				
Aberdeen	0	0	0	300
Bellingham	0	0	200	1,035
Bremerton	1,000	2	926,400	982,285
Hoquiam	0	0	50	50
Longview	0	0	0	440
Port Angeles	0	0	0	0
Washington—Continued.				
Seattle	$5,870	4	$17,905	$120,262
Spokane	0	0	29,480	33,120
Tacoma	0	0	110,400	119,455
Walla Walla	0	0	60	1,335
Wenatchee	0	0	0	780
Yakima	0	0	700	2,800
Wyoming:				
Cheyenne	4,000	1	150	7,805
Total	871,511	258	3,419,316	5,649,206

Hawaii

City	New residential buildings	Families provided for	New nonresidential buildings	Total (including repairs)
Honolulu	$30,029	18	$1,701	$47,833

[1] Not included in totals.

WAGES AND HOURS OF LABOR

Wage-Rate Changes in American Industries

Manufacturing Industries

THE following table presents information concerning wage-rate adjustments occurring between November 15 and December 15, 1933, as shown by reports received from manufacturing establishments supplying employment data to this Bureau.

Increases in wage rates averageing 10.2 percent and affecting 40,212 employees were reported by 174 of the 18,015 manufacturing establishments surveyed in December. Twenty-one establishments in the slaughtering and meat packing industry reported wage-rate increases averaging 10 percent and affecting 15,732 employees. Thirty-eight establishments in the paper and pulp industry reported increases in wage rates also averaging 10 percent and affecting 6,747 employees. Increased wage rates averaging 7.8 percent and affecting 7,143 employees were reported in 3 rayon establishments between November and December. Nine establishments in the automobile industry reported increased wage rates averaging 9.1 percent and affecting 3,222 employees. Increases in wage rates averaging 12.6 percent and affecting 1,694 employees were reported in the foundry and machine-shop products industry. Two establishments in the soap industry reported wage-rate increases averaging 10.1 percent and affecting 1,202 employees. In each of the remaining establishments which reported wage rate increases in December, the employees affected numbered less than 1,000.

Of the 18,015 manufacturing establishments included in the December survey, 17,820 establishments, or 98.9 percent of the total, reported no change in wage rates over the month interval. The 3,084,213 employees not affected by changes in wage rates constituted 98.7 percent of the total number of employees covered by the December trend-of-employment survey of manufacturing industries.

Twenty-one manufacturing establishments in 11 industries reported wage-rate decreases affecting 668 employees between November and December.

TABLE 1.—WAGE-RATE CHANGES IN **MANUFACTURING** INDUSTRIES DURING MONTH ENDING DECEMBER 15, 1933

Industry	Establishments reporting	Total number of employees	Number of establishments reporting—			Number of employees having—		
			No wage-rate changes	Wage-rate increases	Wage-rate decreases	No wage-rate changes	Wage-rate increases	Wage-rate decreases
All manufacturing industries	18,015	3,125,093	17,820	174	21	3,084,213	40,212	668
Percent of total	100.0	100.0	98.9	1.0	0.1	98.7	1.3	(1)
Food and kindred products:								
Baking	982	66,898	982			66,898		
Beverages	382	23,033	377	2	3	22,962	39	32
Butter	275	4,128	275			4,128		
Confectionery	290	37,069	290			37,069		
Flour	408	16,721	407	1		16,561	160	
Ice cream	309	8,155	309			8,155		
Slaughtering and meat packing	235	102,975	214	21		87,243	15,732	
Sugar, beet	57	20,198	57			20,198		
Sugar refining, cane	13	8,534	13			8,534		
Textiles and their products:								
Fabrics:								
Carpets and rugs	27	16,659	27			16,659		
Cotton goods	696	297,787	696			297,787		
Cotton small wares	113	9,650	111	2		9,459	191	
Dyeing and finishing textiles	154	39,840	154			39,840		
Hats, fur-felt	31	5,357	31			5,357		
Knit goods	454	109,130	453		1	108,923		207
Silk and rayon goods	252	49,544	252			49,544		
Woolen and worsted goods	240	63,187	240			63,187		
Wearing apparel:								
Clothing, men's	382	59,640	380	2		59,541	99	
Clothing, women's	558	25,461	549	5	4	25,276	91	94
Corsets and allied garments	30	5,001	30			5,001		
Men's furnishings	75	6,331	74		1	6,316		15
Millinery	138	7,275	138			7,275		
Shirts and collars	116	15,387	116			15,387		
Iron and steel and their products, not including machinery:								
Bolts, nuts, washers, and rivets	79	13,103	79			13,103		
Cast-iron pipe	42	6,611	42			6,611		
Cutlery (not including silver and plated cutlery) and edge tools	131	11,286	127	4		10,923	363	
Forgings, iron and steel	66	8,040	66			8,040		
Hardware	82	26,479	80	2		26,405	74	
Iron and steel	205	240,865	204	1		240,755	110	
Plumbers' supplies	73	8,079	71	2		8,040	39	
Steam and hot-water heating apparatus and steam fittings	97	24,440	97			24,440		
Stoves	160	19,993	159	1		19,899	94	
Structural and ornamental metal work	195	16,163	190	4	1	15,948	105	110
Tin cans and other tinware	60	10,394	60			10,394		
Tools (not including edge tools, machine tools, files, and saws)	120	8,568	119	1		8,555	13	
Wirework	73	7,696	72	1		7,691	5	
Machinery, not including transportation equipment:								
Agricultural implements	76	10,473	75	1		10,181	292	
Cash registers, adding machines, and calculating machines	33	15,641	32		1	15,634		7
Electrical machinery, apparatus, and supplies	282	103,821	280	2		103,672	149	
Engines, turbines, tractors, and waterwheels	91	20,861	91			20,861		
Foundry and machine-shop products	1,033	111,203	1,019	14		109,509	1,694	
Machine tools	155	16,787	152	3		16,765	22	
Radios and phonographs	44	36,306	44			36,306		
Textile machinery and parts	50	12,121	50			12,121		
Typewriters and supplies	13	12,820	13			12,820		

[1] Less than one tenth of 1 percent.

TABLE 1.—WAGE-RATE CHANGES IN **MANUFACTURING** INDUSTRIES DURING MONTH ENDING DECEMBER 15, 1933—Continued

Industry	Establishments reporting	Total number of employees	Number of establishments reporting—			Number of employees having—		
			No wage-rate changes	Wage-rate increases	Wage-rate decreases	No wage-rate changes	Wage-rate increases	Wage-rate decreases
Nonferrous metals and their products:								
Aluminum manufactures	17	3,695	16	1	.....	3,686	9	.....
Brass, bronze, and copper products	218	38,449	217	1	.....	38,397	52	.....
Clocks and watches and time-recording devices	26	8,671	26	.....	.....	8,671	.....	.....
Jewelry	119	7,406	118	1	.....	7,349	57	.....
Lighting equipment	52	3,631	52	.....	.....	3,631	.....	.....
Silverware and plated ware	55	8,818	55	.....	.....	8,818	.....	.....
Smelting and refining—copper, lead, and zinc	40	13,421	40	.....	.....	13,421	.....	.....
Stamped and enameled ware	100	17,152	98	2	.....	16,643	509	.....
Transportation equipment:								
Aircraft	25	7,145	25	.....	.....	7,145	.....	.....
Automobiles	226	215,482	216	9	1	212,248	3,222	12
Cars, electric- and steam-railroad	51	9,803	50	1	.....	9,766	37	.....
Locomotives	11	2,599	11	.....	.....	2,599	.....	.....
Shipbuilding	101	30,709	99	2	.....	30,668	41	.....
Railroad repair shops:								
Electric railroad	359	19,045	359	.....	.....	19,045	.....	.....
Steam railroad	533	71,223	530	.....	3	71,215	.....	8
Lumber and allied products:								
Furniture	456	49,698	452	4	.....	49,297	401	.....
Lumber:								
Millwork	489	20,514	488	1	.....	20,504	10	.....
Sawmills	599	76,135	596	3	.....	75,949	186	.....
Turpentine and rosin	21	1,796	20	1	.....	1,790	.....	.....
Stone, clay, and glass products:								
Brick, tile, and terra cotta	640	17,923	617	20	3	17,097	672	154
Cement	129	10,851	129	.....	.....	10,851	.....	.....
Glass	172	46,300	172	.....	.....	46,300	.....	.....
Marble, granite, slate, and other products	217	4,743	216	1	.....	4,732	11	.....
Pottery	118	17,813	116	2	.....	17,489	324	.....
Leather and its manufactures:								
Boots and shoes	314	93,711	313	1	.....	93,686	25	.....
Leather	154	31,194	153	1	.....	31,188	6	.....
Paper and printing:								
Boxes, paper	322	25,334	320	2	.....	25,279	55	.....
Paper and pulp	432	103,317	393	38	1	96,553	6,747	17
Printing and publishing:								
Book and job	735	46,181	735	.....	.....	46,181	.....	.....
Newspapers and periodicals	431	55,786	429	2	.....	55,654	132	.....
Chemicals and allied products:								
Chemicals	110	27,492	110	.....	.....	27,492	.....	.....
Cottonseed—oil, cake, and meal	108	5,579	107	1	.....	5,547	32	.....
Druggists preparations	56	8,213	56	.....	.....	8,213	.....	.....
Explosives	31	4,399	31	.....	.....	4,399	.....	.....
Fertilizers	169	8,789	168	1	.....	8,771	18	.....
Paints and varnishes	339	15,242	332	5	2	15,187	43	12
Petroleum refining	148	61,457	148	.....	.....	61,457	.....	.....
Rayon and allied products	23	34,195	20	3	.....	27,052	7,143	.....
Soap	109	14,864	107	2	.....	13,662	1,202	.....
Rubber products:								
Rubber boots and shoes	10	15,321	10	.....	.....	15,321	.....	.....
Rubber goods, other than boots, shoes, tires, and inner tubes	98	23,718	98	.....	.....	23,718	.....	.....
Rubber tires and inner tubes	38	54,369	38	.....	.....	54,369	.....	.....
Tobacco manufactures:								
Chewing and smoking tobacco and snuff	32	9,726	32	.....	.....	9,726	.....	.....
Cigars and cigarettes	205	43,474	205	.....	.....	43,474	.....	.....

Nonmanufacturing Industries

DATA concerning wage-rate changes occurring between November 15 and December 15, 1933, reported by cooperating establishments in 15 nonmanufacturing industries are presented in the following table.

No changes in wage rates were reported in the anthracite mining, metalliferous mining, crude-petroleum producing, and telephone and telegraph industries. Increases were reported in each of the remaining 11 industries and decreases were reported in 6 industries over the month interval. Wage-rate increases averaging 12.6 percent and affecting 1,747 employees were reported in the hotel industry. Increases averaging 17.1 percent and affecting 1,611 employees were reported in the bituminous coal-mining industry. The other increases or decreases in rates were not of especial significance.

TABLE 2.—WAGE-RATE CHANGES IN **NONMANUFACTURING** INDUSTRIES DURING MONTH ENDING DECEMBER 15, 1933

Industrial group	Establishments reporting	Total number of employees	Number of establishments reporting—			Number of employees having—		
			No wage-rate changes	Wage-rate increases	Wage-rate decreases	No wage-rate changes	Wage-rate increases	Wage-rate decreases
Anthracite mining	161	75,765	161			75,765		
Percent of total	100.0	100.0	100.0			100.0		
Bituminous-coal mining	1,503	232,031	1,496	7		230,420	1,611	
Percent of total	100.0	100.00	99.5	.5		99.3	.7	
Metalliferous mining	288	27,555	288			27,555		
Percent of total	100.0	100.0	100.0			100.0		
Quarrying and nonmetallic mining	1,162	30,658	1,149	12	1	30,431	214	13
Percent of total	100.0	100.0	98.9	1.0	.1	99.3	.7	(1)
Crude-petroleum producing	253	28,207	253			28,207		
Percent of total	100.0	100.0	100.0			100.0		
Telephone and telegraph	8,192	248,039	8,192			248,039		
Percent of total	100.0	100.0	100.0			100.0		
Power and light	3,135	204,734	3,126	9		204,659	75	
Percent of total	100.0	100.0	99.7	.3		100.0	(1)	
Electric-railroad and motor-bus operation and maintenance	498	131,741	496	2		131,642	99	
Percent of total	100.0	100.0	99.6	.4		99.9	.1	
Wholesale trade	3,036	88,845	3,031	4	1	88,724	112	9
Percent of total	100.0	100.0	99.8	.1	(1)	99.9	.1	(1)
Retail trade	19,062	513,941	19,057	4	1	513,880	27	34
Percent of total	100.0	100.0	100.0	(1)	(1)	100.0	(1)	(1)
Hotels	2,356	129,718	2,325	30	1	127,966	1,747	5
Percent of total	100.0	100.0	98.7	1.3	(1)	98.6	1.3	(1)
Canning and preserving	803	39,319	802	1		39,314	5	
Percent of total	100.0	100.0	99.9	.1		100.0	(1)	
Laundries	1,239	66,024	1,230	7	2	65,651	308	65
Percent of total	100.0	100.0	99.3	.6	.2	99.4	.5	.1
Dyeing and cleaning	342	10,134	338	4		9,977	157	
Percent of total	100.0	100.0	98.8	1.2		98.5	1.5	
Banks, brokerage, insurance, and real estate	4,395	175,190	4,383	9	3	175,092	74	24
Percent of total	100.0	100.0	99.7	.2	.1	99.9	(1)	(1)

[1] Less than one tenth of 1 percent.

Wage Changes Reported by Trade Unions and Municipalities Since October 1933

CHANGES in wages and hours reported to the Bureau of Labor Statistics by trade unions and municipalities in the past month and which occurred during the period October 1933 to January 1934 are shown in the table following. The number of workers covered by this tabulation is 64,503, of whom 45,240 are reported to have gone on the 5-day week. Only three of these reports showed wage decreases.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, OCTOBER 1933 TO JANUARY 1934

Industry or occupation and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
		Per week	*Per week*		
Bakers, Philadelphia, Pa	Jan. 1	$13.00–$35.00	$17.60–$36.00	44	44
Brewery workers, Buffalo, N.Y.:					
Engineers	Oct. 2	38.00	38.00	48	44
General utility men	do	38.00	38.00	48	44
General utility helpers	do	31.00	31.00	48	44
Firemen	do	33.00	33.00	48	44
Oilers and ice pullers	do	28.00	28.00	48	44
Beverage drivers	do	31.00	31.00	50	48
Beverage drivers' helpers	do	30.00	30.00	50	48
Bottle beer drivers	do	28.00	28.00	50	48
General utility drivers	do	30.00	30.00	50	48
Building trades, Santa Barbara, Calif.:		*Per day*	*Per day*		
Electrical workers	do	6.50	7.50	40	30
Plumbers and steamfitters	Nov. 6	7.50	8.00	40	35
Chauffeurs and teamsters:					
Canton, Ohio: Bus drivers, mechanics and garage labor	Dec. 9	*Per hour* .40–0.45	*Per hour* .42–0.46	48	48
New York, N.Y.:		*Per week*	*Per week*		
Bakery drivers	Oct. 3	[1] 22.50	[1] 28.00	(2)	(2)
Flour drivers	Oct. 9	60.00 55.00 48.00	55.00 50.00 43.00	90	48
Furniture-truck drivers	Oct. 2	(2)	(2)	60–70	48
Clothing trades:		*Per hour*	*Per hour*		
Tailors, Pittsburgh, Pa	Oct. 30	[3] .40–1.00	[3] .45–1.10	44	36
Underwear workers, Paterson, N.J	Oct. 18	(3)	(4)	40	40
Coopers, Chicago, Ill., tank markers	Oct. 19	.35–.40	.60–.65	40	40
Metal trades, Plainfield, N.J.: Machinists, printing press industry	Jan. 1	.70	.80	40	40
Miners, coal, Utah:					
Outside labor:			*Per day*		
Hoistmen	Nov. 1	(2)	6.00	(2)	40
Head blacksmiths	do	(2)	5.92	(2)	40
Blacksmiths	do	(2)	5.44	(2)	40
Tool sharpeners	do	(2)	5.44	(2)	40
Blacksmith helpers	do	(2)	4.80	(2)	40
Armature winders	do	(2)	5.76	(2)	40
Electricians and welders	do	(2)	5.60	(2)	40
Mechanics and machinists	do	(2)	5.60	(2)	40
Assistant mechanics and machinists	do	(2)	5.28	(2)	40
Mechanics' helpers	do	(2)	4.96	(2)	40
Shovel operators	do	(2)	5.60	(2)	40
Head carpenters	do	(2)	5.60	(2)	40
Other carpenters	do	(2)	5.60	(2)	40
Carpenter helpers	do	(2)	4.80	(2)	40
Lampmen	do	(2)	5.04	(2)	40
Pipemen	do	(2)	5.44	(2)	40
Rope riders	do	(2)	5.44	(2)	40
Head car repairers	do	(2)	5.28	(2)	40
Car repairers	do	(2)	4.96	(2)	40
Box car loader runners	do	(2)	5.20	(2)	40
Head car dropper	do	(2)	4.96	(2)	40

[1] And 5 percent of receipts.
[2] Not reported.
[3] Piecework.
[4] 15 percent increase.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, OCTOBER 1933 TO JANUARY 1934—Continued

Industry or occupation and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Miners, coal, Utah—Continued.					
Outside labor—Continued.			*Per day*		
Car droppers	Nov. 1	(1)	$4.80	(1)	40
Teamsters (auto-truck drivers, coal production)	do	(1)	4.80	(1)	40
Dumpers	do	(1)	4.96	(1)	40
Tipple men	do	(1)	4.96	(1)	40
Prop sawers	do	(1)	4.80	(1)	40
Prop sawers helpers	do	(1)	4.48	(1)	40
Couplers	do	(1)	4.48	(1)	40
Unclassified labor	do	(1)	4.48	(1)	40
Car oilers (men)	do	(1)	4.48	(1)	40
Cart drivers, coal production	do	(1)	4.48	(1)	40
Boney pickers (men)	do	(1)	4.00	(1)	40
Boney pickers (boys)	do	(1)	3.52	(1)	40
Couplers (boys)	do	(1)	3.52	(1)	40
Car oilers	do	(1)	3.52	(1)	40
Shaker and spiral runners (men)	do	(1)	5.20	(1)	40
Pipemen's helpers	do	(1)	4.80	(1)	40
Inside labor:					
Machine runners, daywork	do	(1)	6.40	(1)	40
Operator of Joy, Thew, Goodman shovel and similar types of loading machines	do	(1)	6.80	(1)	40
Assistant operators	do	(1)	6.00	(1)	40
Shot firers	do	(1)	6.00	(1)	40
Machine runners' helpers	do	(1)	6.00	(1)	40
Machine runners, daywork, C.L.U. cut, shear, and drill	do	(1)	6.80	(1)	40
Machine runners' helpers, daywork, C.L.U. cut, shear, drill	do	(1)	6.00	(1)	40
Drillers (in coal)	do	(1)	5.76	(1)	40
Drillers' (in coal) helpers	do	(1)	5.28	(1)	40
Head trackmen	do	(1)	5.60	(1)	40
Trackmen	do	(1)	5.44	(1)	40
Trackmen's helpers	do	(1)	5.28	(1)	40
Head timbermen	do	(1)	5.60	(1)	40
Timbermen	do	(1)	5.44	(1)	40
Timbermen's helpers	do	(1)	5.28	(1)	40
Head rockmen	do	(1)	5.60	(1)	40
Other rockmen (drilling or shooting rock)	do	(1)	5.44	(1)	40
Muckers	do	(1)	5.28	(1)	40
Wiremen	do	(1)	5.60	(1)	40
Wiremen's helpers	do	(1)	5.28	(1)	40
Motormen	do	(1)	5.60	(1)	40
Bottom cagers	do	(1)	5.60	(1)	40
Hoistmen	do	(1)	5.60	(1)	40
Nippers	do	(1)	5.28	(1)	40
Underground mechanics and machine repairmen	do	(1)	5.60	(1)	40
Masons	do	(1)	5.60	(1)	40
Miners taken from face	do	(1)	5.52	(1)	40
Drivers	do	(1)	5.44	(1)	40
Pipemen	do	(1)	5.44	(1)	40
Bratticemen	do	(1)	5.44	(1)	40
Rollermen	do	(1)	5.44	(1)	40
Rope riders	do	(1)	5.44	(1)	40
Pumpmen	do	(1)	5.28	(1)	40
Sprinklers	do	(1)	5.28	(1)	40
Unclassified labor	do	(1)	5.28	(1)	40
Greasers, boys	do	(1)	3.52	(1)	40
Switch boys and boys couplings at partings	do	(1)	3.52	(1)	40
Trappers, boys	do	(1)	3.52	(1)	40
Dummy makers	do	(1)	3.52	(1)	40
Pick mining:			*Per ton*		
Pick mining, coal 5 feet and over	do	(1)	.65	(1)	40
Pick mining, coal 4 and under 5 feet	do	(1)	.69	(1)	40
Mining after machine cutting, including drilling, loading, track work, timber, and explosives, coal 5 feet or over	do	(1)	.55	(1)	40
Mining after machine cutting, including drilling, loading, track work, timber, and explosives, coal under 5 feet	do	(1)	.59	(1)	40
Pillar mining, coal 5 feet or over, including drilling, loading, track work, timber, and explosives	do	(1)	.55	(1)	40

[1] Not reported.

RECENT WAGE CHANGES, BY INDUSTRY, OCCUPATION, AND LOCALITY, OCTOBER 1933 TO JANUARY 1934—Continued

Industry or occupation and locality	Date of change	Rate of wages		Hours per week	
		Before change	After change	Before change	After change
Miners, coal, Utah—Continued.					
Pick mining—Continued.					
Pillar mining, coal under 5 feet, including drilling, loading, track work, timber, and explosives	Nov. 1	*Per hour* [2]	*Per ton* $0.59	[2]	40
Loading, including tracklaying and timbering	do	[2]	.40	[2]	40
Machinemen and helpers, coal 5 feet or over	do	[2]	.08	[2]	40
C.L.U. machine men and helpers, cut, drill, and shear	do	[2]	.08	[2]	40
Machinemen and helpers, coal under 5 feet	do	[2]	.10	[2]	40
Drilling, and drilling and tamping, coal over 5 feet (company furnishing powder):					
Drilling (one man)	do	[2]	.05	[2]	40
Drilling (two men)	do	[2]	.06	[2]	40
Drilling and tamping	do	[2]	.07½	[2]	40
Pottery employees, United States	Dec. 9	[2]	[3]	50	40
Street-railway employees, Dayton, Ohio: Operators and shopmen	Dec. 1	.46	*Per hour* .50	[4] 65	48
Textile workers, silk, Paterson, N.J.:					
Weavers, warpers, loom fixers	Dec. 2	[2]	[7]	44–55	40
		Per week	*Per week*		
Dyers, printers, finishers	Oct. 24	[5] 18.00	[5] 23.00	[2]	40
Tie and novelty silk workers	do	10.00–25.00	28.00–35.00	40	40
		Per hour	*Per hour*		
Toy and doll workers, Philadelphia, Pa	Nov. 27	[8] .30	[8] .35	40	40
		Per week	*Per week*		
Wall paper workers, Hanover, Pa	Oct. 16	37.50	44.00	55	40
Window cleaners:					
Brooklyn, N.Y.	Oct. 9	40.00	35.00	44	44
New York, N.Y.	do	40.00	36.00	44	40
Municipal employees, Philadelphia, Pa.: School employees, administrative department, clerical assistants, teachers, janitors	Jan. 1	[9]	[10]	[2]	[2]

[2] Not reported.
[3] 12½ percent increase.
[4] Average.
[5] 15 to 20 percent increase.
[6] Minimum.
[7] $1,040–$15,000 per year.
[8] $1,011.40–$13,500 per year.

Adjustment of Federal Salaries to the Cost of Living

THE adjustment of salaries of Federal employees on the basis of the cost of living was provided for in the so-called "Economy Act" (Public, No. 2) passed by Congress in March 1933. With regard to the adjustment of such salaries, the act provides as follows:

SECTION 3. (a) The President is authorized to investigate through established agencies of the Government the facts relating to the cost of living in the United States during the 6-month period ending June 30, 1928, to be known as the base period, and upon the basis of such facts and the application thereto of such principles as he may find proper, determine an index figure of the cost of living during such period. The President is further authorized to make a similar investigation and determination of an index figure of the cost of living during the 6-month period ending December 31 1932, and each 6-month period thereafter.

(b) The President shall announce by Executive order the index figure for the base period and for each subsequent period determined by him under paragraph (a) of this section. The percentage, if any, by which the cost-of-living index for any 6-month period, as provided in paragraph (a) of this section, is lower than such index for the base period, shall be the percentage of reduction applicable under section 2 (b) of this title in determining compensation to be paid during the following 6-month period, or such portion thereof during which this title is in effect: *Provided*, That such percentage of reduction (including reductions made under any existing law, regulation, or Executive order, in the case of subsistence and rental allowances for the services mentioned in the Pay Act of June 10, 1922) shall not exceed 15 per centum.

Acting under this authorization and on the basis of cost-of-living figures for the second half of 1932, President Roosevelt on March 28, 1933, issued an Executive order reducing salaries 15 percent for the period April 1 to June 30, 1933. A later order continued the 15 percent decrease through the second half of 1933.

The Federal Department of Labor was asked to compile further data on the cost of living of Government employees in the District of Columbia. This study was made during the last 4 months of 1933. Under the terms of the "Economy Act", the inquiry was limited to finding out the cost of the Federal employee's budget during the first 6 months of 1928 priced at present prices.

The investigation was made by the Bureau of Labor Statistics in cooperation with the Bureau of Home Economics of the Department of Agriculture. Assistance was also furnished by the Committee on Government Statistics and Information Services of the American Statistical Association and the Social Science Research Council, and by the Consumers' Advisory Board of the National Recovery Administration. The Women's Bureau and the Children's Bureau of the Department of Labor and an Interdepartmental Committee on Retail Prices, consisting of representatives of the various Federal agencies, cooperated in the field work.

A basis for information was obtained on the expenditures of different types of Federal employees at both dates, through detailed schedules filled out in personal interviews with employees whose names were chosen by lot, and through two questionnaires, one sent to all employees and one to a large sample of employees whose names were likewise chosen by lot.

From these data the quantity and the cost of different goods and services purchased by Federal employees in the first 6 months of 1928 were ascertained, the cost of the same bill of goods and services in December 1933 was computed, and index numbers were calculated showing relative costs of the two periods. Prices were collected which will make it possible to calculate living costs in March 1933, but they have not yet been summarized.

Taking costs in the first 6 months of 1928 as 100, the index of the average cost of living for all Federal employees in the District for December 1933 was 85.4, showing a decline of 14.6 percent.

In addition to the index for all employees, separate indexes were computed for the families of three categories of employees—custodial, with salaries less than $2,500; other employees with salaries below $2,500; and employees with salaries of $2,500 or more. An index was also computed for single individuals living in rented rooms, of whom there are about 10,000. The indexes for these groups were as follows:

Custodial, with salaries less than $2,500	83.4
Other employees with salaries less than $2,500	85.1
Employees with salaries $2,500 or over	85.0
Single individuals living in rented rooms	88.0

It will be noted that the cost of living of Federal employees living as single individuals in rented rooms has not declined since 1928 to the same extent as the cost for employees living in family groups and keeping house. This difference is attributable to the fact that the cost of meals in restaurants has not fallen as much as the cost of unprepared food purchased to be eaten at home.

It is significant to emphasize the fact that the decline of 16.6 percent in the cost of living of the custodial group corresponds rather closely to the decline for the families of wage earners and of the lower-salaried workers in the District of Columbia as secured through the Bureau's regular semiannual cost-of-living survey.[1] Although the latter index shows an increase of 6.5 percent between June and December 1933, it is still 17.9 percent below the average of the index for December 1927 and June 1928.

Taking the wage-earning and lower-salaried family groups for the United States as a whole, the cost-of-living index showed an average increase of 5.2 percent during the past 6 months. As compared with the average for the first 6 months of 1928, the index showed a decline in living costs for the 32 cities covered by the Bureau of 21.1 percent.

The following table shows the indexes for each item in the family budgets, on the basis of the first half of 1928 as 100.0:

[1] See p. 476 of this issue.

INDEX NUMBERS OF EXPENDITURES BY FEDERAL EMPLOYEES IN THE DISTRICT OF COLUMBIA IN DECEMBER 1933

[First 6 months of 1928=100.0]

Classification and salary group	Index numbers of expenditures for—					
	Housing [1]	Household operation	Food	Clothing	Furnishings and equipment	Transportation
Professional ($3,000–$3,999)	89.6	85.9	70.6	83.6	86.7	86.9
Clerical, administrative, and fiscal ($1,500–$1,999)	90.4	87.9	71.4	83.5	87.0	91.9
Custodial ($1,000–$1,499)	91.3	88.6	69.6	85.3	86.9	94.7
Single individuals ($1,500–$1,999)	85.0	101.1	82.3	82.7	87.5	92.2
All employees (weighted)	89.5	88.8	72.7	83.5	86.9	89.7

Classification and salary group	Index numbers of expenditures for—						General index
	Education	Recreation	Personal care	Medical care	Insurance	Retirement annuities	
Professional ($3,000–$3,999)	107.1	92.3	89.7	95.4	105.5	100.0	85.0
Clerical, administrative, and fiscal ($1,500–$1,999)	108.7	92.0	87.7	95.9	105.5	100.0	85.1
Custodial ($1,000–$1,499)	108.7	94.8	93.1	98.0	105.5	100.0	83.4
Single individuals ($1,500–$1,999)	108.7	94.0	86.9	96.6	105.5	100.0	88.0
All employees (weighted)	108.7	92.7	88.5	96.0	105.5	100.0	85.4

[1] Includes expenses of home owners.

As the Economy Act directed that salaries be adjusted on the basis of the cost of living in the United States, the President took into consideration both sets of figures—those for the District of Columbia and those for the country as a whole—and issued an Executive order continuing the 15 percent decrease in salaries through June 1934. His order reads as follows:

By virtue of the authority vested in me by sections 2 and 3, title II, of the act entitled "An act to maintain the credit of the United States Government", approved March 20, 1933 (Public, No. 2, 73d Cong.), I hereby announce:

First. That the index figures of the cost of living are—

(a) 171.0 for the 6-month period ending June 30, 1928, the base period, and

(b) 135.0 for the 6-month period ending December 31, 1933;

Second. That the cost-of-living index for the 6-month period ending December 31, 1933, is 21.1 percent lower than the cost-of-living index for the base period; and

Third. That this percent being in excess of the maximum percent prescribed by section 3 (b), the percentage of reduction applicable under section 2 (b), in determining the compensation of officers and employees to be paid during the period from January 1, 1934, to June 30, 1934, inclusive, is 15 percent.

Wages of Seamen, 1933

THE following data on wages of seamen on American vessels are from Merchant Marine Statistics for 1931 and 1933, compiled by the Bureau of Navigation and Steamboat Inspection of the United States Department of Commerce, and represent averages taken from reports of the shipping commissioners.

Table 1 gives average monthly wage rates on American steam and motor cargo vessels of 5,000 gross tons and over on January 1 of 1929, 1932, and 1933.

TABLE 1.—AVERAGE MONTHLY WAGES OF SEAMEN ON AMERICAN STEAM AND MOTOR CARGO VESSELS OF 5,000 GROSS TONS AND OVER ON JANUARY 1, 1929, 1932, AND 1933

Position	Private			United States Shipping Board		
	1929	1932	1933	1929	1932	1933
Deck department:						
First mate	$182	$174	$164	$185	$185	$172
Second mate	160	150	144	165	162	154
Third mate	143	134	127	150	147	140
Fourth mate	121	110	98	128	128	105
Boatswain	74	69	64	75	74	68
Carpenter	68	73	66	80	76	72
Seaman, able	64	56	52	62	61	58
Seaman, ordinary	45	41	38	47	46	43
Engineer department:						
Chief engineer	280	262	256	261	261	250
First assistant engineer	183	175	165	187	185	173
Second assistant engineer	161	151	144	168	164	155
Third assistant engineer	145	137	128	152	149	140
Fireman	63	59	54	65	65	60
Oiler	71	67	61	72	72	67
Water tender	71	66	59	72	72	65
Coal passer or wiper	55	49	45	58	55	53
Radio operators (Class I): Grade I	----	96	91	----	103	94
Steward department:						
Chief steward	122	116	111	121	120	116
Second steward	103	94	86	100	97	88
Cook	100	95	92	100	99	111
Second cook	81	72	69	80	79	73
Mess steward	49	43	40	51	46	43
Mess boy	42	39	36	43	41	39

The average monthly wages paid in 1933 on American merchant vessels of 500 gross tons and over are shown in table 2, by destination of vessel.

TABLE 2.—AVERAGE MONTHLY WAGES PAID ON AMERICAN MERCHANT VESSELS OF 500 GROSS TONS AND OVER IN 1933, BY DESTINATION OF VESSEL

Occupation	Destination of vessel								
	Great Britain	Continental Europe	South America	West Indies, Mexico, and Central America	Atlantic and Gulf coasting trade	Asia and Australia	Pacific coasting trade	Africa	Atlantic to Pacific ports and vice versa
Steam vessels:									
Able seaman	$55	$55	$52	$49	$51	$52	$52	$48	$47
Boatswain	67	68	63	60	63	65	62	55	57
Carpenter	68	70	70	67	68	68	64	63	60
First mate	169	177	167	159	158	171	152	155	155
Second mate	149	157	145	137	137	148	129	132	123
Fireman	58	58	53	52	53	54	51	48	48
Trimmer	53	49	44	43	43	48	44	42	40
Chief engineer	246	258	248	240	229	253	231	244	240
First assistant engineer	169	177	168	159	158	183	152	155	154
Chief radio operator	90	95	92	90	88	95	90	88	85
Second radio operator	82	80	80	81	76	81	60	75	78
Sailing vessels:									
Able seaman	----	----	----	30	26	----	----	----	----
Boatswain	----	----	----	----	55	----	----	----	----
First mate	----	----	----	70	60	----	----	----	----

TREND OF EMPLOYMENT

Trend of Employment, December 1933

THE Bureau of Labor Statistics of the United States Department of Labor presents herewith data compiled from pay-roll reports supplied by representative establishments in 89 of the principal manufacturing industries of the country and 16 nonmanufacturing industries, covering the pay period ending nearest the 15th of the month. Additional information is presented concerning employment on public-works projects, public roads, the Federal service, and class I steam railroads.

Employment in Selected Manufacturing Industries in December 1933

Comparison of Employment and Pay-Roll Totals in December 1933 with November 1933 and December 1932

FACTORY employment decreased 1.8 percent in December 1933 as compared with November 1933 and pay rolls decreased 1 percent over the month interval, according to reports received from representative establishments in 89 important manufacturing industries of the country. Comparing the indexes of employment in December 1933 and December 1932, the level of employment in the former month is 20.2 percent above the level in December 1932. The December 1933 pay-roll index, compared with the December 1932 pay-roll index indicates an increase of 32.1 percent in pay rolls over the corresponding month of the preceding year.

The index of employment in December 1933 was 70.1, as compared with 71.4 in November 1933, 74 in October 1933 and 58.3 in December 1932; the pay-roll index in December 1933 was 49.8, as compared with 50.3 in November 1933, 53.6 in October 1933, and 37.7 in December 1932. The 12-month average for 1926 equals 100.

These changes in employment and pay rolls in December 1933 are based on reports supplied by 18,015 establishments in 89 of the principal manufacturing industries of the United States. These establishments reported 3,125,093 employees on their pay rolls during the pay period ending nearest December 15 whose combined weekly earnings were $56,352,943. The employment reports received from these cooperating establishments cover approximately 50 percent of the total wage earners in all manufacturing industries of the country.

Declines in factory employment in December as compared with November have been recorded in 7 of the 10 preceding years for which data are available. The decrease, therefore, in employment over the

month interval is not unexpected, although the decline of 1.8 percent in December is greater than the average decrease of 0.8 percent shown in December over the 10-year period 1923–32. The decrease of 1 percent in pay rolls in December 1933 is contrary to the average change in pay rolls between November and December over the preceding 10-year period (an average increase of less than one tenth of 1 percent).

This percentage decrease in factory employment between November and December represents the release of approximately 113,000 workers from gainful employment in manufacturing establishments over the month interval. The percentage decline in pay rolls reduces the estimated amount of weekly wages disbursed in December by $880,000 as compared with November. .

The index of factory employment in December 1933 compared with the March employment index (55.1) shows a gain of 27.2 percent in employment over this 9-month interval. A similar comparison of the pay-roll indexes in these 2 months indicates an increase in December of 49.1 percent over the March pay-roll index (33.4). These percentage gains indicate an increase in actual number of workers over this interval of approximately 1,338,000 and in weekly pay rolls of approximately $36,200,000.

Increases in employment were reported in 25 of the 89 manufacturing industries surveyed, and 37 industries reported increases in pay rolls over the month interval. While 64 industries reported decreased employment, a number of the decreases were of seasonal character, the clothing industries regularly reporting declines in employment at this time of year as do the industries connected with building construction, i.e., brick, cement, sawmills, millwork, and steam fittings. Other seasonal declines were reported in the confectionery, ice cream, baking, flour, shoe, paper box, stove, and furniture industries. The most pronounced gains in both employment and pay rolls between November and December were in the automobile industry, in which increases of 16.7 percent in employment and 16.3 percent in pay rolls were reported. These sharp increases reflect the increased operations in automobile plants, marking the production of new models. The electric- and steam-car building industry reported a gain of 11.9 percent in employment and a corresponding gain in pay-roll totals, and the agricultural implement industry reported an increase of 9.2 percent in number of workers with a larger gain in earnings. The most pronounced decline in employment over the month interval (19.7 percent) was reported in the men's furnishings industry. The stove industry reported a drop of 15.4 percent in number of employees, and the radio and cement industries reported decreases of 11.6 and 11.3 percent, respectively. Decreases in employment ranging from 10 to 10.6 percent were reported in the shirt

and collar, women's clothing, cane-sugar refining, and confectionery industries. The highly seasonal beet-sugar industry reported a decrease of 9 percent in employment, denoting the slackening in operations following the November peak activities.

Two of the 14 groups into which the manufacturing industries are classified showed gains in employment between November and December, the remaining 12 groups reporting decreased employment over the month interval. The increase in employment in the transportation group was quite pronounced (14.4 percent) and was due primarily to sharp increases in employment in the automobile, electric- and steam-car building, and shipbuilding industries. The increase in employment in the paper and printing group was small (0.3 percent) and was due to increased employment in the book and job and the newspaper and periodical printing industries, which more than offset the declines in employment in the paper box and the paper and pulp industries. The most pronounced decline in employment (6 percent) over the month interval in the 12 groups reporting decreased employment was shown in the tobacco manufactures group, in which decreases in both the cigar and cigarette and the chewing and smoking tobacco industries were reported. The textile group reported a decline of 4.8 percent in employment between November and December, each of the 14 industries in this group reporting decreased employment. A number of the decreases in this group were seasonal. The lumber group reported a decrease of 4.5 percent in employment, due chiefly to declines in the furniture and sawmill industries. and the nonferrous metals group reported a decrease of 3.4 percent, each of the eight industries comprising this group reporting decreased employment. The food group reported a decrease of 3 percent in employment between November and December, due largely to seasonal declines in the confectionery, ice cream, beet sugar, and baking industries. The rubber products group reported a decrease of 2.9 percent, due chiefly to the sharp decline in the rubber goods, other than shoes and tires, industry, and the stone-clay-glass group reported a decrease of 2.6 percent reflecting the seasonal declines in the brick, cement, and marble-slate-granite industries. The railroad repair shop group reported a decrease of 2.2 percent in employment between November and December. The iron and steel and machinery groups reported decreases of 1.6 percent each. In the former group, the iron and steel industry reported a decrease of 1.3 percent in employment, coupled with an increase of 1.9 percent in pay rolls, reflecting improved operating time in certain plants, while in the latter group, the foundry and machine-shop and the electrical-machinery industries reported decreases of 1.9 and 1.4 percent, respectively. Among the industries which reported increased employment in this last-named group are two industries, agricultural implements and machine tools. in which

the changes are of especial significance. Both of these industries have shown consistent expansion since the early part of this year, and while still employing only approximately 50 percent of the number normally employed in the industry, have reached in December the highest point registered in these industries since 1931.

A comparison of the indexes of employment and pay roll in manufacturing industries in December 1933 with December 1932 shows that 81 of the 89 industries surveyed reported increased employment over the year interval while 82 industries had increased pay rolls. The beverage industry showed the most pronounced gain in employment over the year interval, 120.3 percent, due to legalizing the manufacture of beer. Other outstanding percentage gains in employment over the year interval were shown in radios, typewriters, fertilizers, agricultural implements, machine tools, textile machinery, forgings, and engines-turbines-tractors. Increases in employment ranging from 35 to 46.1 percent were reported in the turpentine and rosin, glass, chemicals, smelting, plumbers' supplies, wirework, iron and steel, aircraft, cash registers, stoves, carpets, tools, rubber tires, and sawmill industries. Decreases in both employment and pay roll over the 12-month period were reported in seven industries—women's clothing, corsets and allied garments, men's furnishings, millinery, electric-railroad repair shops, marble-granite-slate, and cigars and cigarettes. The shirt and collar industry reported a decrease in employment in December 1933, compared with December 1932, coupled with an increase in pay rolls.

In table 1, which follows, are shown the number of identical establishments reporting in both November and December 1933 in the 89 manufacturing industries surveyed, together with the total number of employees on the pay rolls of these establishments during the pay period ending nearest December 15, the amount of their earnings for 1 week in December, the percentages of change over the month and year intervals, and the indexes of employment and pay roll in December 1933.

The monthly percentages of change for each of the 89 separate industries are computed by direct comparison of the total number of employees and of the amount of weekly pay roll reported in identical establishments for the 2 months considered. The percentages of change over the month interval in the several groups and in the total of the 89 manufacturing industries are computed from the index numbers of these groups, which are obtained by weighting the index numbers of the several industries in the groups by the number of employees or wages paid in the industries. The percentages of change over the year interval in the separate industries, in the groups and in the totals, are computed from the index numbers of employment and pay-roll totals.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING** ESTABLISHMENTS IN DECEMBER 1933 WITH NOVEMBER 1933 AND DECEMBER 1932

Industry	Establishments reporting in both November and December	Employment			Pay-roll totals			Index numbers December 1933 (average 1926=100)	
		Number on pay roll December 1933	Percent of change		Amount of pay roll (1 week) December 1933	Percent of change		Employment	Pay-roll totals
			November to December 1933	December 1932 to December 1933		November to December 1933	December 1932 to December 1933		
Food and kindred products	**2,951**	**287,711**	**−3.0**	**+18.4**	**$6,046,322**	**+1.0**	**+25.1**	**98.5**	**81.2**
Baking	982	66,898	−1.4	+10.1	1,464,472	−.8	+11.0	86.9	71.7
Beverages	382	23,033	+3.1	+120.3	652,116	+8.6	+150.2	140.8	126.6
Butter	275	4,128	−1.5	+7.8	80,436	−2.9	+1.4	101.1	74.6
Confectionery	290	37,069	−10.6	+1.5	566,860	−3.3	+12.1	87.7	71.4
Flour	408	16,721	−2.1	+13.5	342,400	+.2	+12.2	94.0	74.7
Ice cream	309	8,155	−5.1	+6.9	205,179	−4.3	+6.0	66.2	49.8
Slaughtering and meat packing	235	102,975	−.9	+23.9	2,185,465	+7.1	+34.8	106.8	91.8
Sugar, beet	57	20,198	−9.0	+30.8	370,924	−14.0	+56.9	263.1	175.6
Sugar refining, cane	13	8,534	−10.4	+10.0	178,470	−11.2	+.2	82.2	61.3
Textiles and their products	**3,266**	**710,249**	**−4.8**	**+11.8**	**9,964,016**	**−7.4**	**+26.6**	**79.7**	**56.7**
Fabrics	**1,967**	**591,154**	**−4.0**	**+17.5**	**8,253,041**	**−5.9**	**+32.7**	**86.7**	**65.8**
Carpets and rugs	27	16,659	−7.0	+36.6	274,312	−10.2	+57.1	71.6	48.7
Cotton goods	696	297,787	−3.0	+27.5	3,670,596	−5.3	+54.5	95.9	77.1
Cotton small wares	113	9,650	−5.1	+8.6	144,703	−3.9	+17.7	85.6	64.4
Dyeing and finishing textiles	154	39,840	−1.4	+17.1	714,688	−3.5	+23.8	91.3	66.0
Hats, fur-felt	31	5,357	−2.3	+6.3	104,816	−7.4	+9.2	69.3	45.3
Knit goods	454	109,130	−6.0	+1.9	1,607,568	−11.2	+12.1	86.8	66.5
Silk and rayon goods	252	49,544	−5.6	+3.2	686,689	−7.8	+18.2	61.6	45.5
Woolen and worsted goods	240	63,187	−4.0	+18.7	1,049,669	−.9	+26.5	84.9	65.4
Wearing apparel	**1,299**	**119,095**	**−7.5**	**−3.4**	**1,710,975**	**−12.0**	**+9.9**	**63.0**	**38.8**
Clothing, men's	382	59,640	−5.9	+3.2	832,599	−15.2	+27.7	67.1	39.2
Clothing, women's	558	25,461	−10.1	−11.3	434,490	−11.4	−.6	56.6	35.8
Corsets and allied garments	30	5,001	−.9	−.9	69,224	+2.7	−5.5	97.4	72.4
Men's furnishings	75	6,331	−19.7	−23.6	76,745	−24.7	−17.2	53.1	33.7
Millinery	138	7,275	−1.3	−.3	116,456	−.8	−.3	59.7	35.2
Shirts and collars	116	15,387	−10.0	−2.0	181,461	−15.1	+14.5	62.7	47.4
Iron and steel and their products, not including machinery	**1,383**	**401,717**	**−1.6**	**+35.8**	**7,086,366**	**+.9**	**+78.9**	**69.8**	**43.3**
Bolts, nuts, washers, and rivets	79	13,103	−3.7	+34.6	228,321	−5.3	+62.9	82.8	54.9
Cast-iron pipe	42	6,611	+4.4	+20.3	102,691	+15.8	+52.0	34.9	22.5
Cutlery (not including silver and plated cutlery) and edge tools	131	11,286	−2.2	+25.1	217,057	+1.6	+40.2	76.7	55.1
Forgings, iron and steel	66	8,040	+1.6	+58.1	156,023	+5.3	+104.3	84.4	56.8
Hardware	82	26,479	+5.5	+16.5	463,342	+15.8	+41.2	58.0	35.3
Iron and steel	205	240,865	−1.3	+39.9	4,213,822	+1.9	+102.7	72.9	44.4
Plumbers' supplies	73	8,079	−4.6	+42.3	118,428	−.9	+61.1	65.6	34.0
Steam and hot-water heating apparatus and steam fittings	97	24,440	−3.4	+28.8	450,524	+.6	+46.8	43.8	27.9
Stoves	160	19,993	−15.4	+37.4	338,065	−21.9	+52.3	68.0	39.3
Structural and ornamental metalwork	195	16,163	−1.2	+23.5	291,572	−3.6	+44.0	49.4	31.4
Tin cans and other tinware	60	10,394	+3.0	+22.9	205,894	+9.1	+30.6	87.4	55.5
Tools (not including edge tools, machine tools, files, and saws)	120	8,568	−.2	+36.2	155,737	+1.3	+57.1	83.2	54.5
Wirework	73	7,696	+.4	+40.9	144,890	+8.0	+88.4	123.0	99.5

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING ESTABLISHMENTS IN DECEMBER 1933 WITH NOVEMBER 1933 AND DECEMBER 1932—Continued

Industry	Establishments reporting in both November and December	Employment			Pay-roll totals			Index numbers December 1933 (average 1926=100)	
		Number on pay roll December 1933	Percent of change		Amount of pay roll (1 week) December 1933	Percent of change		Employment	Pay-roll totals
			November to December 1933	December 1932 to December 1933		November to December 1933	December 1932 to December 1933		
Machinery, not including transportation equipment	**1,777**	**340,033**	**−1.6**	**+39.0**	**36,608,956**	**−1.4**	**+58.9**	**63.1**	**42.9**
Agricultural implements	76	10,473	+9.2	+69.6	195,783	+11.7	+118.3	44.1	39.3
Cash registers, adding machines, and calculating machines	33	15,641	+.6	+38.2	394,490	+2.4	+58.1	87.2	72.1
Electrical machinery, apparatus, and supplies	282	103,821	−1.4	+27.0	1,934,347	−3.5	+38.2	61.7	44.9
Engines, turbines, tractors, and water wheels	91	20,861	+5.1	+53.4	468,658	+10.7	+70.8	61.5	42.7
Foundry and machine-shop products	1,033	111,203	−1.9	+32.0	2,062,997	−1.2	+54.9	58.2	36.1
Machine tools	155	16,787	+2.1	+67.1	361,753	+4.4	+101.1	52.3	37.8
Radios and phonographs	44	36,306	−11.6	+112.5	679,684	−14.6	+121.2	149.6	112.6
Textiles machinery and parts	50	12,121	−3.2	+59.8	250,725	−5.2	+86.4	86.6	64.5
Typewriters and supplies	13	12,820	+2.3	+73.4	260,519	+8.8	+121.2	89.8	71.0
Nonferrous metals and their products	**627**	**101,243**	**−3.4**	**+27.5**	**1,842,671**	**−3.6**	**+44.0**	**67.7**	**48.4**
Aluminum manufactures	17	3,695	−1.0	+31.4	60,493	−2.7	+41.4	62.4	41.0
Brass, bronze, and copper products	218	38,449	−3.8	+31.8	725,280	−.6	+56.4	67.2	46.3
Clocks and watches and time-recording devices	26	8,671	−8.9	+10.9	154,448	−13.0	+36.6	48.0	28.8
Jewelry	119	7,406	−8.6	+8.5	142,319	−8.7	+12.7	40.7	30.2
Lighting equipment	52	3,631	−.4	+26.8	67,202	+3.0	+37.3	85.2	64.0
Silverware and plated ware	55	8,818	−4.9	+23.2	174,897	−6.7	+39.9	76.6	52.9
Smelting and refining—copper, lead, and zinc	40	13,421	−2.9	+43.2	239,767	−6.1	+37.7	84.2	51.9
Stamped and enameled ware	100	17,152	−1.9	+16.8	278,265	−4.1	+48.0	69.7	51.2
Transportation equipment	**414**	**265,738**	**+14.4**	**+28.4**	**5,363,313**	**+14.0**	**+32.2**	**58.7**	**41.5**
Aircraft	25	7,145	−.3	+38.5	176,938	−3.5	+19.4	259.9	131.0
Automobiles	226	215,482	+16.7	+29.7	4,304,091	+16.3	+35.7	59.9	42.2
Cars, electric- and steam-railroad	51	9,803	+11.9	+22.5	175,906	+11.8	+22.4	24.5	14.2
Locomotives	11	2,599	−7.5	+34.5	48,942	−10.7	+27.4	18.7	12.1
Shipbuilding	101	30,709	+6.0	+20.7	657,436	+5.5	+16.7	80.6	60.1
Railroad repair shops	**892**	**90,268**	**−2.2**	**−.4**	**2,148,217**	**−2.9**	**+4.9**	**49.7**	**40.9**
Electric railroad	359	19,045	+.1	−2.7	488,690	+1.0	−4.0	64.1	52.3
Steam railroad	533	71,223	−2.5	+.8	1,659,527	−3.5	+5.8	48.6	40.0
Lumber and allied products	**1,565**	**148,143**	**−4.5**	**+28.1**	**2,049,383**	**−7.7**	**+46.3**	**46.9**	**27.5**
Furniture	456	49,698	−8.9	+17.2	694,815	−11.0	+27.7	53.8	30.4
Lumber:									
Millwork	489	20,514	−2.5	+14.5	302,534	−.9	+25.7	37.8	23.0
Sawmills	599	76,135	−4.1	+35.0	1,030,365	−8.5	+68.4	45.1	26.6
Turpentine and rosin	21	1,796	+6.5	+46.1	21,669	+7.8	+50.8	66.9	56.4
Stone, clay, and glass products	**1,276**	**97,636**	**−2.6**	**+20.6**	**1,610,957**	**−2.6**	**+26.4**	**49.1**	**30.2**
Brick, tile, and terra cotta	640	17,923	−7.3	+12.6	221,685	−7.2	+25.3	26.8	12.4
Cement	129	10,851	−11.3	+2.1	172,067	−17.1	+2.3	33.6	17.6
Glass	172	46,300	+.9	+44.1	840,270	+2.2	+57.6	82.4	60.5
Marble, granite, slate, and other products	217	4,743	−3.5	−8.3	84,147	−1.7	−21.4	39.6	22.1
Pottery	118	17,813	+(1)	+19.1	292,788	−2.8	+26.8	74.2	46.8

[1] Less than one tenth of 1 percent.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING ESTABLISHMENTS IN DECEMBER 1933 WITH NOVEMBER 1933 AND DECEMBER 1932—Continued

Industry	Establishments reporting in both November and December	Employment			Pay-roll totals			Index numbers December 1933 (average 1926=100)	
		Number on pay roll December 1933	Percent of change		Amount of pay roll (1 week) December 1933	Percent of change		Employment	Pay-roll totals
			November to December 1933	December 1932 to December 1933		November to December 1933	December 1932 to December 1933		
Leather and its manufactures	**468**	**124,905**	**−.3**	**+7.6**	**$2,062,903**	**+1.9**	**+29.5**	**74.6**	**52.7**
Boots and shoes	314	93,711	−1.5	+2.6	1,436,556	+.2	+25.3	70.8	46.6
Leather	154	31,194	+3.5	+27.2	626,347	+6.2	+39.7	89.9	74.2
Paper and printing	**1,920**	**230,618**	**+.3**	**+13.8**	**5,193,523**	**+2.1**	**+10.6**	**90.5**	**71.8**
Boxes, paper	322	25,334	−5.4	+16.3	440,676	−3.9	+19.7	83.6	69.4
Paper and pulp	432	103,317	−1.2	+26.0	1,817,073	−.9	+31.5	92.0	61.4
Printing and publishing:									
Book and job	735	46,181	+3.8	+6.3	1,177,032	+6.2	+5.7	77.3	62.7
Newspapers and periodicals	431	55,786	+1.4	+9.5	1,758,742	+2.2	+3.8	107.3	89.1
Chemicals and allied products	**1,093**	**180,230**	**−.8**	**+28.7**	**3,858,992**	**+.4**	**+29.3**	**97.3**	**77.2**
Chemicals	110	27,492	−.5	+43.4	644,863	+1.8	+47.0	121.3	87.9
Cottonseed—oil, cake, and meal	108	5,579	−4.2	+2.3	55,441	−6.7	+7.2	52.3	47.5
Druggists' preparations	56	8,213	+1.2	+16.8	158,672	+.2	+15.7	83.4	82.0
Explosives	31	4,399	−2.8	+30.3	87,480	−5.6	+36.2	103.3	70.4
Fertilizers	169	8,789	+4.3	+72.6	109,153	+8.7	+58.2	75.1	48.1
Paints and varnishes	339	15,242	−1.0	+17.2	314,895	+.8	+20.5	77.0	59.4
Petroleum refining	148	61,457	+1.1	+18.7	1,562,791	−.5	+15.4	74.2	59.8
Rayon and allied products	23	34,195	−3.0	+30.6	625,159	+.9	+42.4	191.8	174.5
Soap	109	14,864	−4.7	+13.1	300,538	−3.7	+11.4	106.9	88.2
Rubber products	**146**	**93,408**	**−2.9**	**+31.2**	**1,817,773**	**+2.1**	**+45.8**	**84.6**	**59.2**
Rubber boots and shoes	10	15,321	+.8	+19.5	276,969	+2.7	+29.4	70.4	63.3
Rubber goods, other than boots, shoes, tires, and inner tubes	98	23,718	−7.4	+29.8	409,224	−5.4	+29.1	108.5	72.7
Rubber tires and inner tubes	38	54,369	−.9	+35.7	1,131,580	+5.6	+60.7	79.1	53.5
Tobacco manufactures	**237**	**53,200**	**−6.0**	**−1.8**	**699,551**	**−7.3**	**+.2**	**69.5**	**53.6**
Chewing and smoking tobacco and snuff	32	9,726	−2.3	+1.2	133,284	+2.2	+6.3	87.8	73.8
Cigars and cigarettes	205	43,474	−6.5	−2.3	566,267	−8.7	−.8	67.2	51.2
Total, 89 industries	**18,015**	**3,125,093**	**−1.8**	**+20.2**	**$6,352,943**	**−1.0**	**+32.1**	**70.1**	**49.8**

Per Capita Earnings in Manufacturing Industries

PER capita weekly earnings in December 1933 for each of the 89 manufacturing industries surveyed by the Bureau of Labor Statistics and for all industries combined, together with the percentages of change in December 1933 as compared with November 1933 and December 1932, are shown in table 2.

These earnings must not be confused with full-time weekly rates of wages. They are per capita weekly earnings, computed by dividing the total amount of pay roll for the week by the total number of employees (part-time as well as full-time workers).

TABLE 2.—PER CAPITA WEEKLY EARNINGS IN **MANUFACTURING** INDUSTRIES IN DECEMBER 1933 AND COMPARISON WITH NOVEMBER 1933 AND DECEMBER 1932

Industry	Per capita weekly earnings in December 1933	Percent of change	
		November 1933–December 1933	December 1932–December 1933
Food and kindred products:			
Baking	$21.89	+0.6	+0.8
Beverages	28.31	+5.3	+13.5
Butter	19.49	−1.4	−6.0
Confectionery	15.29	+8.1	+10.1
Flour	20.48	+2.4	−1.1
Ice cream	25.16	+.9	−.5
Slaughtering and meat packing	21.22	+8.0	+8.8
Sugar, beet	18.36	−5.5	+19.6
Sugar refining, cane	20.91	−.9	−8.7
Textiles and their products:			
Fabrics:			
Carpets and rugs	16.47	−3.5	+15.0
Cotton goods	12.33	−2.4	+20.5
Cotton small wares	15.00	+1.2	+7.9
Dyeing and finishing textiles	17.94	−2.2	+6.0
Hats, fur-felt	19.57	−5.2	+2.7
Knit goods	14.73	−5.6	+9.7
Silk and rayon goods	13.86	−2.4	+14.3
Woolen and worsted goods	16.61	+3.2	+6.1
Wearing apparel:			
Clothing, men's	13.96	−9.9	+23.7
Clothing, women's	17.06	−1.5	+12.5
Corsets and allied garments	13.84	+3.7	−4.5
Men's furnishings	12.12	−6.2	+8.4
Millinery	16.01	+.6	+.2
Shirts and collars	11.79	−5.6	+16.8
Iron and steel and their products, not including machinery:			
Bolts, nuts, washers, and rivets	17.43	−1.6	+20.8
Cast-iron pipe	15.53	+10.8	+26.2
Cutlery (not including silver and plated cutlery) and edge tools	19.23	+3.9	+11.7
Forgings, iron and steel	19.41	+3.7	+29.7
Hardware	17.50	+9.8	+21.3
Iron and steel	17.49	+3.2	+45.6
Plumbers' supplies	14.66	+3.9	+13.4
Steam and hot-water heating apparatus and steam fittings	18.43	+4.1	+14.2
Stoves	16.91	−7.7	+11.2
Structural and ornamental metalwork	18.04	−2.4	+16.5
Tin cans and other tinware	19.81	+5.9	+6.2
Tools (not including edge tools, machine tools, files, and saws)	18.18	+1.6	+15.7
Wirework	18.83	+7.5	+33.5
Machinery, not including transportation equipment:			
Agricultural implements	18.69	+2.2	+28.7
Cash registers, adding machines, and calculating machines	25.22	+1.8	+14.2
Electrical machinery, apparatus, and supplies	18.63	−2.1	+8.6
Engines, turbines, tractors, and water wheels	22.47	+5.3	+11.5
Foundry and machine-shop products	18.55	+.7	+17.3
Machine tools	21.55	+2.3	+19.7
Radios and phonographs	18.72	−3.4	+4.0
Textile machinery and parts	20.69	−2.1	+16.6
Typewriters and supplies	20.32	+6.3	+28.0
Nonferrous metals and their products:			
Aluminum manufactures	16.37	−1.7	+7.5
Brass, bronze, and copper products	18.86	+3.3	+18.8
Clocks and watches and time-recording devices	17.81	−4.6	+23.1
Jewelry	19.22	−.1	+3.6
Lighting equipment	18.51	+3.4	+8.0
Silverware and plated ware	19.83	−1.9	+13.6
Smelting and refining—copper, lead, and zinc	17.87	−3.3	−3.7
Stamped and enameled ware	16.22	−2.2	+26.8
Transportation equipment:			
Aircraft	24.76	−3.2	−13.9
Automobiles	19.97	−.4	+5.0
Cars, electric- and steam-railroad	17.94	−.1	−.3
Locomotives	18.83	−3.4	−5.7
Shipbuilding	21.41	−.4	−3.3
Railroad repair shops:			
Electric railroad	25.66	+.9	−1.5
Steam railroad	23.30	−1.0	+4.7
Lumber and allied products:			
Furniture	13.98	−2.4	+8.8
Lumber:			
Millwork	14.75	+1.7	+9.8
Sawmills	13.53	−4.7	+24.4
Turpentine and rosin	12.07	+1.3	+3.0

TABLE 2.—PER CAPITA WEEKLY EARNINGS IN MANUFACTURING INDUSTRIES IN DECEMBER 1933 AND COMPARISON WITH NOVEMBER 1933 AND DECEMBER 1932—Continued

Industry	Per capita weekly earnings in December 1933	Percent of change	
		November 1933–December 1933	December 1932–December 1933
Stone, clay, and glass products:			
Brick, tile, and terra cotta	$12.37	+0.1	+11.2
Cement	15.86	−6.6	+.2
Glass	18.15	+1.3	+9.5
Marble, granite, slate, and other products	17.74	+1.9	−13.9
Pottery	16.44	−2.8	+6.2
Leather and its manufactures:			
Boots and shoes	15.33	+1.7	+21.8
Leather	20.08	+2.7	+10.3
Paper and printing:			
Boxes, paper	17.39	+1.6	+2.7
Paper and pulp	17.59	+.3	+4.4
Printing and publishing:			
Book and job	25.49	+2.4	−.5
Newspapers and periodicals	31.53	+.9	−5.3
Chemicals and allied products:			
Chemicals	23.46	+2.4	+2.9
Cottonseed—oil, cake, and meal	9.94	−2.5	+5.3
Druggists' preparations	19.32	−1.0	−.8
Explosives	19.89	−2.8	+4.5
Fertilizers	12.42	+4.3	−8.1
Paints and varnishes	20.66	+1.7	+2.7
Petroleum refining	25.43	−1.7	−2.8
Rayon and allied products	18.28	+4.0	+8.8
Soap	20.22	+1.0	−1.7
Rubber products:			
Rubber boots and shoes	18.08	+1.9	+7.9
Rubber goods, other than boots, shoes, tires, and inner tubes	17.25	+2.1	−.4
Rubber tires and inner tubes	20.81	+6.6	+18.3
Tobacco manufactures:			
Chewing and smoking tobacco and snuff	13.70	+4.6	+5.3
Cigars and cigarettes	13.03	−2.4	+1.8
Total, 89 industires	18.03	[1] +.9	[1] +9.7

[1] Weighted.

General Index Numbers of Employment and Pay-Roll Totals in Manufacturing Industries

GENERAL index numbers of employment and pay-roll totals in manufacturing industries, by months, from January 1926 to December 1933, inclusive, together with average indexes for each of the years from 1926 to 1933, inclusive, are shown in the following table. In computing these general indexes the index numbers of each of the separate industries are weighted according to their relative importance in the total.

TABLE 3.—GENERAL INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES, JANUARY 1926 TO DECEMBER 1933

[12-month average, 1926=100]

Month	Employment								Pay rolls							
	1926	1927	1928	1929	1930	1931	1932	1933	1926	1927	1928	1929	1930	1931	1932	1933
January	100.4	97.3	91.6	95.2	90.7	74.6	64.8	56.6	98.0	94.9	89.6	94.5	88.1	63.7	48.6	35.8
February	101.5	99.0	93.0	97.4	90.9	75.3	65.6	57.5	102.2	100.6	93.9	101.8	91.3	68.1	49.6	36.4
March	102.0	99.5	93.7	98.6	90.5	75.9	64.5	55.1	103.4	102.0	95.2	103.9	91.6	69.6	48.2	33.4
April	101.0	98.6	93.3	99.1	89.9	75.7	62.2	56.0	101.5	100.8	93.8	104.6	90.7	68.5	44.7	34.9
May	99.8	97.6	93.0	99.2	88.6	75.2	59.7	58.7	99.8	99.8	94.1	104.8	88.6	67.7	42.5	38.9
June	99.3	97.0	93.1	98.8	86.5	73.4	57.5	62.8	99.7	97.4	94.2	102.8	85.2	63.8	39.3	43 1
July	97.7	95.0	92.2	98.2	82.7	71.7	55.2	67.3	95.2	93.0	91.2	98.2	77.0	60.3	36.2	46.5
August	98.7	95.1	93.6	98.6	81.0	71.2	56.0	71.6	98.7	95.0	94.2	102.1	75.0	59.7	36.3	51 9
September	100.3	95.8	95.0	99.3	80.9	70.9	58.5	73.9	99.3	94.1	95.4	102.6	75.4	55.7	38.1	53 3
October	100.7	95.3	95.9	98.4	79.9	68.9	59.9	74.0	102.9	95.2	99.0	102.4	74.0	55.3	39.9	53.6
November	99.5	93.5	95.4	95.0	77.9	67.1	59.4	71.4	99.6	91.6	96.1	95.4	69.6	52.5	38.6	50.3
December	98.9	92.6	95.5	92.3	76.6	66.7	58.3	70.1	99.8	93.2	97.7	92.4	68.8	52.2	37.7	49.8
Average	**100.0**	**96.4**	**93.8**	**97.5**	**84.7**	**72.2**	**60.1**	**64.6**	**100.0**	**96.5**	**94.5**	**100.5**	**81.3**	**61.5**	**41.6**	**44.0**

Index numbers showing relatively the variation in employment and pay rolls for each of the 89 industries included in the Bureau's survey, for each of the 14 groups of industries, and for all manufacturing industries combined, are shown in table 4, by months, for the years of 1931, 1932, and 1933, together with average indexes for each of the years from 1923 through 1933, where available.

The expansion of the Bureau's employment survey in 1931 to include 35 additional manufacturing industries, affected the comparability of certain group indexes over the entire period. The group indexes for years prior to 1931 are therefore not presented in the following tables except where the index numbers are strictly comparable with the group indexes now published.

The average general index of employment for the 12 months of 1933 for the 89 industries combined was 7.5 percent above the average index for 1932, and the pay-roll index was 5.8 percent higher than the average index for 1932.

Following table 4 are two charts which show the course of employment and pay-roll totals in all manufacturing industries combined for each month of the years 1926 to 1933, inclusive.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933

[12-month average 1926=100]

Month and year	General index		Food and kindred products									
			Group index		Baking		Beverages		Butter		Confectionery	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	108.8	104.3	(1)	(1)	99.2	94.8	(1)	(1)	(1)	(1)	116.3	107.0
1924 average	98.2	94.6	(1)	(1)	100.5	98.4	(1)	(1)	(1)	(1)	103.2	99.9
1925 average	99.2	97.7	(1)	(1)	98.7	97.1	(1)	(1)	(1)	(1)	98.1	96.4
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	96.4	96.5	(1)	(1)	101.4	102.2	(1)	(1)	(1)	(1)	96.5	97.9
1928 average	93.8	94.5	(1)	(1)	100.9	101.6	(1)	(1)	(1)	(1)	93.0	93.3
1929 average	97.5	100.5	(1)	(1)	102.1	103.5	(1)	(1)	(1)	(1)	92.3	94.1
1930 average	84.7	81.3	(1)	(1)	96.8	98.5	(1)	(1)	(1)	(1)	85.9	86.2
1931 average	72.2	61.5	88.7	85.6	90.5	87.1	85.7	80.4	105.9	100.1	82.4	75.6
1932 average	60.1	41.6	82.1	69.5	81.8	70.9	74.2	62.2	97.3	83.1	76.3	59.7
1933 average	64.6	44.0	89.0	70.9	81.7	66.2	128.2	114.2	98.4	74.2	82.0	59.3
1931												
January	74.6	63.7	90.5	90.2	90.5	89.6	79.7	74.1	97.5	96.3	83.1	81.1
February	75.3	68.1	87.9	87.8	90.6	89.5	80.6	75.7	97.1	98.8	83.9	79.1
March	75.9	69.6	86.9	85.7	90.6	88.9	81.9	78.0	99.5	98.1	82.3	77.2
April	75.7	68.5	86.6	85.2	90.1	87.5	86.3	82.8	106.8	102.1	78.1	73.2
May	75.2	67.7	87.8	86.8	91.7	89.7	89.2	86.0	107.7	103.9	78.6	73.3
June	73.4	63.8	88.3	87.1	91.9	89.7	93.1	88.9	110.9	106.2	77.3	72.5
July	71.7	60.3	88.3	86.3	92.5	88.8	97.5	95.7	116.3	106.3	69.2	59.8
August	71.2	59.7	88.3	84.9	91.6	86.7	94.5	91.3	113.6	103.4	74.0	67.1
September	70.9	56.7	89.7	85.1	91.2	86.7	89.5	84.5	113.7	104.0	89.5	82.6
October	68.9	55.3	91.0	84.5	90.1	85.1	83.9	75.2	105.5	95.6	93.0	83.4
November	67.1	52.5	90.0	82.7	88.0	82.7	77.0	67.6	103.7	95.6	90.3	79.1
December	66.7	52.2	89.2	81.0	86.8	80.4	75.3	64.5	98.2	90.7	89.2	79.0
1932												
January	64.8	48.6	83.1	75.2	84.3	77.8	73.3	61.6	91.5	82.7	75.7	66.2
February	65.6	49.6	81.1	72.8	83.2	76.4	72.1	60.6	84.2	79.6	74.5	62.9
March	64.5	48.2	80.2	71.3	83.5	75.8	72.3	61.5	93.7	84.9	71.2	59.3
April	62.2	44.7	79.8	70.3	82.9	73.0	76.2	65.1	97.3	85.9	68.6	56.5
May	59.7	42.5	80.5	70.9	82.8	72.4	77.9	69.6	100.7	90.1	65.4	52.5
June	57.5	39.3	80.9	69.9	82.4	71.4	82.1	74.8	103.4	89.0	65.2	51.2
July	55.2	36.2	79.4	66.8	81.6	68.8	79.8	70.0	104.7	87.2	58.7	43.2
August	56.0	36.3	80.6	66.2	80.7	67.6	74.8	63.8	103.5	85.6	71.5	53.3
September	58.5	38.1	83.6	68.7	80.4	68.7	77.0	62.0	101.8	83.4	88.9	69.1
October	59.9	39.9	87.1	69.7	80.9	68.5	72.6	55.2	96.8	78.5	97.3	73.6
November	59.4	38.6	85.4	66.7	79.4	66.2	68.0	51.4	95.7	76.7	92.6	64.9
December	58.3	37.7	83.2	64.9	78.9	64.6	63.9	50.6	93.8	73.6	86.4	63.7
1933												
January	56.6	35.8	78.7	62.1	77.3	63.4	63.5	49.4	88.6	71.0	76.3	54.0
February	57.5	36.4	77.4	60.1	77.0	62.1	64.8	49.7	89.0	68.8	75.5	52.6
March	55.1	33.4	76.4	58.1	76.4	60.3	76.2	58.4	88.9	68.3	70.7	44.7
April	56.0	34.9	80.1	63.9	77.3	61.5	117.3	112.1	91.8	68.9	73.8	48.5
May	58.7	38.9	83.2	67.1	78.2	62.5	136.1	132.1	94.6	71.5	74.1	51.0
June	62.8	43.1	86.5	69.7	79.3	63.7	160.8	151.6	102.0	75.7	73.6	48.6
July	67.3	46.5	88.1	71.8	80.4	65.5	166.9	155.7	102.9	77.3	70.8	47.5
August	71.5	51.9	94.0	74.7	82.9	66.5	163.0	148.9	105.9	77.6	85.6	63.2
September	73.9	53.3	100.1	80.1	87.9	72.3	161.4	141.6	107.3	79.5	94.8	75.7
October	74.0	53.6	103.7	81.7	89.0	72.5	150.9	127.7	106.0	80.7	102.4	80.1
November	71.4	50.3	101.5	80.4	88.2	72.3	136.6	116.6	102.7	76.8	98.1	73.8
December	70.1	49.8	98.5	81.2	86.9	71.7	140.8	126.6	101.1	74.6	87.7	71.4

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Food and kindred products—Continued									
	Flour		Ice cream		Slaughtering and meat packing		Sugar, beet		Sugar refining, cane	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	114.2	110.9	103.9	95.8	122.9	118.4	[1]	[1]	106.8	104.6
1924 average	108.1	108.2	100.3	93.1	115.1	111.8	[1]	[1]	104.6	105.4
1925 average	103.1	102.5	101.3	98.3	104.4	102.6	[1]	[1]	104.5	104.6
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	99.3	99.4	94.0	93.4	99.5	99.9	[1]	[1]	98.8	98.8
1928 average	100.0	102.1	92.4	93.1	99.5	101.0	[1]	[1]	91.1	94.9
1929 average	102.1	105.3	91.9	93.0	101.0	103.2	[1]	[1]	94.0	98.5
1930 average	97.0	99.9	87.6	87.5	97.1	100.2	[1]	[1]	91.6	94.4
1931 average	88.2	84.2	80.6	78.2	90.8	89.8	83.7	72.5	81.7	80.0
1932 average	83.9	70.2	72.8	61.7	86.9	72.9	84.6	59.9	76.3	66.9
1933 average	87.3	67.7	71.1	53.2	95.4	75.8	113.1	78.5	80.9	65.3
1931										
January	90.4	87.7	74.3	73.9	96.6	101.7	138.1	95.6	81.4	79.3
February	89.0	87.9	74.7	76.2	94.0	96.3	33.0	40.0	79.9	82.3
March	87.7	85.2	76.2	76.9	90.2	90.2	29.4	36.5	82.2	84.5
April	87.9	84.4	78.5	79.4	89.4	90.0	29.5	33.9	83.5	83.5
May	86.3	84.1	83.7	82.6	90.6	91.6	30.3	35.1	79.1	79.5
June	85.3	81.5	90.3	87.3	90.2	91.0	34.6	38.8	80.7	81.6
July	90.5	86.7	94.5	90.7	89.1	89.5	39.8	41.6	84.2	86.8
August	90.0	86.4	93.2	87.6	88.2	86.5	52.7	50.0	84.3	82.1
September	88.9	83.3	86.8	82.4	88.3	85.3	54.9	55.8	82.8	79.7
October	88.5	84.0	76.7	71.8	89.0	84.9	177.9	129.8	79.8	75.4
November	87.9	83.3	70.1	66.1	90.4	82.9	203.3	177.5	82.2	74.3
December	85.7	75.3	68.7	63.8	93.3	87.1	180.3	135.5	80.0	70.6
1932										
January	85.1	73.6	68.2	62.8	91.5	83.0	51.0	42.4	79.2	68.2
February	84.3	72.2	68.4	62.8	89.8	79.2	25.6	30.5	75.7	67.4
March	84.8	71.2	68.3	62.8	85.9	74.8	26.5	28.3	76.6	69.7
April	84.7	72.7	71.0	64.3	84.7	74.3	29.1	29.8	74.4	67.4
May	84.5	72.7	76.7	67.2	86.8	76.0	33.5	34.7	76.0	68.7
June	82.8	68.3	84.7	70.9	86.2	73.6	39.7	35.7	74.7	66.7
July	83.2	68.8	83.4	69.0	85.2	69.9	40.8	33.1	75.8	69.4
August	82.5	67.9	81.6	66.4	85.0	67.8	52.3	41.0	76.4	68.9
September	84.6	68.9	76.5	61.5	87.1	70.8	62.6	49.4	77.4	68.5
October	84.7	72.3	68.5	55.0	87.7	70.8	213.9	125.7	77.8	64.7
November	83.0	67.7	64.1	50.4	86.2	66.9	238.5	156.3	76.4	62.5
December	82.8	66.6	61.9	47.0	86.2	68.1	201.1	111.9	74.7	61.2
1933										
January	82.2	66.5	61.3	47.1	84.5	67.1	114.4	66.7	71.8	56.2
February	81.0	61.9	61.7	46.6	84.6	65.9	49.1	33.6	74.1	57.7
March	80.5	60.9	61.9	46.0	82.5	61.4	35.4	30.1	74.6	65.0
April	83.3	66.8	63.2	47.1	83.3	65.9	39.3	32.2	75.1	65.1
May	84.0	66.2	67.4	50.9	87.5	69.6	43.6	33.8	78.0	68.1
June	82.8	62.6	78.0	58.8	90.3	72.6	48.9	36.2	78.3	68.8
July	87.9	70.6	80.0	59.8	92.8	74.4	52.5	40.1	80.4	71.5
August	85.3	62.1	82.5	61.5	102.6	80.7	81.5	59.2	84.3	67.9
September	94.0	70.8	83.9	61.1	111.4	87.5	91.8	66.9	86.6	65.1
October	96.2	75.3	76.8	57.5	110.5	87.0	248.8	163.0	93.2	68.0
November	96.0	74.5	69.8	52.0	107.8	85.7	289.1	204.1	91.8	69.1
December	94.0	74.7	66.2	49.8	106.8	91.8	263.1	175.6	82.2	61.3

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING** INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Textiles and their products													
	Textile group index		Fabrics group index		Carpets and rugs		Cotton goods		Cotton small wares		Dyeing and finishing textiles		Hats, fur-felt	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	(1)	(1)	(1)	(1)	106.5	110.1	120.3	123.5	(1)	(1)	102.1	99.9	(1)	(1)
1924 average	(1)	(1)	(1)	(1)	98.1	95.2	99.9	99.6	(1)	(1)	94.0	91.8	(1)	(1)
1925 average	(1)	(1)	(1)	(1)	100.7	101.2	101.1	101.1	(1)	(1)	101.7	102.3	(1)	(1)
1926 average	**100.0**	**100.0**	**100.0**	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	(1)	(1)	(1)	(1)	102.5	104.1	105.0	108.5	(1)	(1)	100.9	102.8	(1)	(1)
1928 average	(1)	(1)	(1)	(1)	101.0	95.9	95.2	91.7	(1)	(1)	99.5	101.0	(1)	(1)
1929 average	(1)	(1)	(1)	(1)	106.8	101.4	95.5	94.3	(1)	(1)	101.8	102.2	(1)	(1)
1930 average	(1)	(1)	(1)	(1)	81.9	66.0	80.6	73.3	(1)	(1)	93.0	87.9	(1)	(1)
1931 average	**77.7**	**66.0**	**77.3**	**67.4**	72.2	57.2	75.4	64.9	93.2	84.6	88.0	80.7	82.2	56.7
1932 average	**68.1**	**46.1**	**69.0**	**48.1**	54.4	32.6	69.1	47.7	78.4	57.7	77.2	57.2	65.8	39.6
1933 average	**79.0**	**53.8**	**83.2**	**59.6**	63.4	43.0	89.1	66.3	88.3	64.6	82.0	58.2	71.1	45.2
1931														
January	**76.0**	**65.2**	**75.5**	**66.7**	67.0	50.2	73.2	65.3	94.0	89.1	92.9	85.9	87.1	63.1
February	**79.2**	**72.7**	**78.0**	**72.7**	71.7	62.8	73.3	65.8	99.4	98.2	95.5	96.2	88.8	66.6
March	**81.5**	**75.9**	**79.9**	**74.1**	76.1	64.6	76.8	69.8	104.1	105.5	95.4	94.5	89.5	60.4
April	**80.6**	**71.8**	**79.1**	**71.9**	77.2	64.6	77.3	71.4	104.0	99.6	93.5	90.6	87.9	51.0
May	**80.3**	**69.2**	**80.1**	**72.8**	78.2	65.4	79.1	72.6	100.4	94.8	91.2	84.7	81.5	53.4
June	**77.9**	**65.8**	**78.1**	**69.0**	77.1	63.0	77.0	68.1	94.4	84.9	86.0	76.2	77.9	52.5
July	**76.5**	**64.5**	**77.3**	**67.1**	75.2	60.4	76.2	65.8	90.5	79.7	82.7	73.7	83.9	60.4
August	**77.9**	**67.0**	**77.7**	**68.3**	76.6	59.0	75.0	64.3	88.4	75.8	84.1	77.4	85.7	67.0
September	**78.6**	**65.3**	**77.5**	**65.0**	69.7	52.6	75.4	62.4	87.9	74.2	86.0	76.6	85.8	69.1
October	**76.4**	**62.0**	**75.6**	**62.4**	69.5	50.9	74.1	60.1	86.5	75.3	82.9	70.9	78.4	51.1
November	**74.0**	**56.6**	**74.8**	**59.4**	65.1	48.1	73.5	56.1	85.6	69.8	82.5	70.4	70.0	43.1
December	**73.1**	**56.0**	**74.5**	**59.3**	63.1	44.9	73.8	56.8	82.9	68.8	83.0	71.5	69.8	42.5
1932														
January	**72.2**	**54.0**	**73.4**	**56.7**	62.9	44.5	72.9	55.3	84.8	71.9	83.0	70.0	69.1	42.3
February	**75.1**	**57.6**	**75.9**	**59.8**	61.8	40.6	75.6	58.5	87.5	75.1	86.2	75.4	67.0	40.2
March	**73.4**	**55.3**	**73.1**	**55.2**	62.4	41.3	75.0	57.0	86.6	70.0	85.8	72.4	67.0	41.5
April	**67.9**	**46.2**	**67.1**	**46.1**	58.1	36.3	69.3	48.5	81.8	59.3	80.7	59.7	62.2	29.2
May	**62.7**	**39.1**	**62.1**	**39.6**	54.9	30.1	63.6	40.9	75.2	52.3	74.9	49.4	56.9	24.6
June	**58.6**	**35.2**	**58.1**	**36.4**	52.0	26.2	57.4	35.2	71.6	47.9	71.5	49.5	56.4	27.7
July	**55.3**	**32.1**	**56.5**	**34.4**	44.4	23.3	55.5	32.9	69.3	44.8	64.1	37.8	59.4	32.6
August	**62.3**	**40.1**	**63.9**	**42.1**	47.1	24.2	61.2	38.4	68.5	44.3	68.1	47.3	68.0	44.0
September	**71.1**	**49.5**	**72.5**	**51.4**	47.2	25.3	71.9	50.3	73.0	53.1	77.8	60.0	74.4	57.0
October	**74.7**	**52.1**	**76.1**	**54.7**	54.2	34.6	75.9	53.6	81.0	61.5	77.9	57.6	74.1	51.7
November	**73.0**	**47.4**	**74.9**	**51.3**	55.1	33.2	75.5	51.6	82.3	57.5	78.1	54.0	69.4	42.9
December	**71.3**	**44.8**	**73.8**	**49.6**	52.4	31.0	75.2	49.9	78.8	54.7	78.0	53.3	65.2	41.5
1933														
January	**69.6**	**42.2**	**72.5**	**46.2**	51.2	27.0	74.8	48.4	76.0	50.8	77.3	52.5	64.9	38.8
February	**72.1**	**45.8**	**73.5**	**48.1**	49.6	25.2	74.3	48.0	79.8	56.8	78.2	56.7	66.5	37.1
March	**67.5**	**39.0**	**67.8**	**40.2**	47.8	25.6	72.0	44.0	74.8	48.0	75.3	49.4	64.3	33.4
April	**69.5**	**42.0**	**69.3**	**42.4**	47.3	25.3	73.5	45.7	76.2	48.9	76.4	53.4	66.6	34.1
May	**73.3**	**45.4**	**75.4**	**49.6**	51.2	32.9	79.3	52.5	81.2	58.9	77.2	55.2	67.2	36.4
June	**80.7**	**52.7**	**85.4**	**60.1**	59.1	42.3	91.7	65.1	89.2	66.4	81.0	60.2	68.5	43.8
July	**86.4**	**57.6**	**93.7**	**66.9**	70.2	50.6	101.4	73.7	99.4	76.4	88.5	64.6	70.5	46.1
August	**88.8**	**66.3**	**96.2**	**76.5**	74.6	57.2	103.5	87.8	105.4	82.2	93.1	65.8	82.6	57.3
September	**88.5**	**68.9**	**94.3**	**74.6**	78.4	61.2	101.4	85.6	101.8	78.4	77.4	52.7	84.8	63.7
October	**87.9**	**67.7**	**93.6**	**74.4**	82.8	65.7	102.6	86.4	99.6	77.4	75.7	54.0	76.8	57.6
November	**83.7**	**61.2**	**90.3**	**69.9**	77.0	54.3	98.8	81.4	90.2	67.0	92.6	68.4	71.0	48.9
December	**79.7**	**56.7**	**86.7**	**65.8**	71.6	48.7	95.9	77.1	85.6	64.4	91.3	66.0	69.3	45.3

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY POLLS IN **MANUFACTURING** INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Textiles and their products—Continued									
	Knit goods		Silk and rayon goods		Woolen and worsted goods		Wearing apparel group index		Clothing, men's	
	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals
1923 average	102.1	91.3	99.8	93.9	124.5	126.7	(1)	(1)	118.6	128.4
1924 average	92.6	82.9	94.1	88.6	113.3	114.1	(1)	(1)	106.9	111.0
1925 average	100.2	96.4	103.1	102.7	110.7	110.6	(1)	(1)	103.1	105.8
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	**100.0**	**100.0**	100.0	100.0
1927 average	99.0	102.2	98.4	99.2	99.7	100.6	(1)	(1)	97.8	97.3
1928 average	94.7	97.3	96.9	100.2	95.0	94.4	(1)	(1)	92.2	89.0
1929 average	98.1	104.3	98.0	100.9	96.0	96.3	(1)	(1)	91.9	88.2
1930 average	87.5	84.6	86.5	81.7	77.7	72.7	(1)	(1)	80.4	67.9
1931 average	81.3	69.9	73.9	64.5	75.4	68.1	**78.4**	**63.3**	74.6	56.2
1932 average	79.6	56.5	56.6	38.1	65.4	48.5	**66.2**	**42.3**	65.3	37.3
1933 average	86.5	60.9	62.1	42.6	85.9	63.9	**68.9**	**42.4**	70.5	41.8
1931										
January	75.0	64.4	81.6	70.8	68.8	61.9	**77.0**	**62.4**	71.2	53.9
February	79.3	72.0	84.3	78.6	74.8	71.9	**82.0**	**72.9**	75.6	62.9
March	80.1	73.4	83.2	76.2	76.4	73.0	**85.3**	**79.5**	77.5	66.2
April	80.6	72.9	80.7	71.9	71.7	65.4	**84.4**	**71.5**	76.1	58.2
May	81.4	74.7	76.9	66.9	77.4	72.4	**80.7**	**62.2**	72.8	50.7
June	81.9	72.4	67.4	58.1	80.9	74.5	**77.5**	**59.4**	73.3	55.6
July	79.9	64.4	63.6	55.6	84.8	78.6	**74.5**	**59.3**	76.3	62.1
August	81.3	67.2	65.3	58.9	86.6	81.4	**78.3**	**64.5**	78.7	65.0
September	81.6	67.4	69.5	59.2	81.4	68.3	**81.1**	**65.9**	79.8	59.3
October	84.5	70.6	73.0	62.4	68.6	58.1	**78.4**	**61.2**	77.0	54.8
November	85.8	70.3	70.7	57.2	67.4	55.9	**72.0**	**51.2**	69.7	43.0
December	84.5	68.8	70.9	57.9	66.0	55.2	**69.9**	**49.5**	66.8	42.8
1932										
January	80.1	59.2	69.5	52.9	67.3	56.9	**69.4**	**48.8**	66.6	43.4
February	81.6	63.4	69.3	51.3	73.8	63.4	**73.1**	**53.4**	71.8	47.8
March	81.6	62.5	58.0	38.6	66.5	53.4	**74.2**	**55.6**	71.2	47.4
April	79.3	56.8	52.9	34.4	54.0	37.7	**69.8**	**46.6**	65.5	36.2
May	75.8	50.1	46.0	28.6	50.7	34.5	**64.2**	**38.1**	59.8	30.2
June	74.7	49.1	41.2	24.9	49.2	32.6	**59.8**	**32.8**	55.9	25.9
July	67.5	40.4	41.4	25.8	56.9	38.4	**52.2**	**27.5**	56.4	26.0
August	72.7	46.2	53.7	36.8	70.4	50.4	**58.6**	**36.4**	62.3	35.7
September	80.9	58.3	61.2	41.3	76.1	56.4	**67.9**	**45.7**	68.3	42.9
October	86.8	66.7	64.9	44.9	76.9	56.7	**71.5**	**47.0**	70.9	43.9
November	89.1	66.1	60.8	39.6	71.3	49.7	**68.3**	**39.8**	69.7	38.0
December	85.2	59.3	59.7	38.5	71.5	51.7	**65.2**	**35.3**	65.0	30.7
1933										
January	79.3	48.4	59.7	35.8	71.4	49.9	**62.9**	**34.4**	62.1	31.3
February	79.7	50.1	59.6	36.5	78.3	57.1	**68.7**	**41.1**	68.2	39.1
March	77.2	46.0	51.3	29.5	59.9	35.5	**66.9**	**36.5**	66.5	35.7
April	78.9	48.7	51.7	29.5	62.6	39.5	**69.8**	**41.3**	66.0	32.5
May	82.7	54.0	57.0	35.7	75.6	52.6	**68.4**	**37.1**	64.6	31.1
June	89.2	59.6	59.7	39.3	93.3	72.1	**69.4**	**38.0**	69.9	36.9
July	90.6	59.2	68.1	46.6	105.5	82.2	**69.0**	**39.3**	76.2	45.4
August	89.0	68.6	73.9	58.2	108.6	86.6	**71.3**	**46.3**	77.8	51.9
September	95.1	75.4	72.5	54.4	102.8	82.1	**74.6**	**57.5**	78.7	56.4
October	96.6	79.5	65.2	50.5	99.6	78.1	**74.3**	**54.5**	77.1	55.3
November	92.4	74.9	65.3	49.3	88.4	66.0	**68.1**	**44.1**	71.3	46.2
December	86.8	66.5	61.6	45.5	84.9	65.4	**63.0**	**38.8**	67.1	39.2

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING** INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Textiles and their products—Continued									
	Clothing, women's		Corsets and allied garments		Men's furnishings		Millinery and lace goods		Shirts and collars	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	126.3	124.4	(1)	(1)	(1)	(1)	138.1	133.1	118.9	117.1
1924 average	111.9	108.6	(1)	(1)	(1)	(1)	120.3	117.1	100.6	97.5
1925 average	105.6	109.3	(1)	(1)	(1)	(1)	117.1	115.8	103.3	103.2
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	105.4	107.4	(1)	(1)	(1)	(1)	95.6	96.8	95.0	96.3
1928 average	105.4	105.2	(1)	(1)	(1)	(1)	93.5	92.7	92.2	89.9
1929 average	105.4	105.1	(1)	(1)	(1)	(1)	93.1	91.1	92.7	90.8
1930 average	94.2	87.2	(1)	(1)	(1)	(1)	85.1	78.4	81.1	70.9
1931 average	85.3	70.3	102.8	95.9	73.9	66.1	76.4	63.8	72.3	57.1
1932 average	66.7	44.3	100.0	79.2	61.1	40.4	68.6	48.6	58.4	37.6
1933 average	66.5	40.6	100.2	76.0	62.5	37.8	68.1	43.1	64.0	44.4
1931										
January	87.8	72.1	99.0	92.7	72.4	62.5	76.8	63.3	67.2	52.9
February	93.6	85.3	101.2	103.6	78.2	75.4	82.4	73.0	71.5	59.1
March	98.6	93.8	104.1	117.1	79.7	80.3	88.3	86.1	74.2	62.4
April	98.3	83.7	109.1	121.8	77.7	66.4	84.4	77.7	75.1	62.8
May	93.2	72.4	108.2	102.5	77.4	69.5	76.5	60.9	74.9	62.7
June	84.9	62.4	104.2	97.9	74.2	62.7	72.4	56.6	72.7	57.8
July	74.1	57.2	99.3	85.0	68.7	60.9	67.9	51.4	71.4	59.4
August	80.1	63.5	101.4	85.8	66.2	59.4	77.4	66.6	72.4	59.1
September	85.4	73.6	105.1	84.0	70.6	60.7	79.6	68.3	74.6	59.0
October	80.2	67.4	103.3	91.7	76.9	68.4	75.2	60.0	75.9	57.0
November	73.5	56.6	100.8	87.2	72.1	66.7	68.1	51.9	71.8	50.3
December	73.5	55.4	98.0	81.7	72.4	59.9	67.5	49.9	65.3	42.9
1932										
January	71.5	50.1	101.4	86.1	62.4	46.8	77.0	60.9	60.0	40.0
February	74.4	55.4	105.6	95.5	64.3	48.5	82.0	65.9	60.8	41.9
March	77.5	61.9	108.1	95.2	66.1	51.0	84.3	67.3	60.3	41.1
April	76.2	54.2	105.2	86.7	61.7	40.5	75.8	58.4	57.1	36.8
May	71.6	44.5	101.4	80.0	56.9	34.8	62.6	41.6	55.5	33.5
June	64.8	36.6	99.0	71.6	56.8	35.7	55.7	35.2	55.0	34.1
July	45.4	25.6	90.9	63.2	46.6	28.4	47.1	28.5	51.3	30.5
August	53.4	34.9	92.6	61.6	46.3	26.0	62.4	43.1	50.7	31.8
September	66.8	45.5	96.2	70.7	60.2	37.7	75.7	59.4	57.4	34.7
October	70.6	48.1	101.0	85.6	68.8	45.4	76.7	49.9	63.8	42.0
November	64.8	38.4	99.7	77.0	73.2	49.1	64.1	37.6	65.3	43.7
December	63.8	36.0	98.3	76.6	69.5	40.7	59.9	35.3	64.0	41.4
1933										
January	63.6	34.8	96.6	68.6	61.7	32.1	64.9	39.8	53.4	30.2
February	69.5	42.2	102.6	80.7	63.3	33.8	72.0	43.2	58.2	34.5
March	67.0	35.8	102.4	68.1	60.3	32.2	69.8	37.5	57.9	34.7
April	74.6	46.7	101.4	72.4	59.2	31.0	77.5	54.5	58.8	35.1
May	74.2	39.3	100.5	76.2	58.4	33.0	71.4	44.3	59.3	36.1
June	68.2	33.9	100.8	77.5	63.0	37.4	68.8	42.4	65.1	43.0
July	59.3	31.0	99.4	73.4	66.7	37.3	58.6	33.6	70.8	44.4
August	59.8	34.1	101.3	83.9	68.3	47.7	72.5	49.5	69.3	54.3
September	70.6	58.9	105.7	88.1	62.7	42.1	72.2	57.5	69.6	54.6
October	71.7	54.5	95.5	80.6	67.1	48.9	69.6	43.9	73.4	62.8
November	63.0	40.4	98.2	70.5	66.1	44.8	60.5	35.5	69.7	55.9
December	56.6	35.8	97.4	72.4	53.1	33.7	59.7	35.2	62.7	47.4

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Iron and steel and their products, not including machinery									
	Group index		Bolts, nuts, washers, and rivets		Cast-iron pipe		Cutlery and edge tools		Forgings, iron and steel	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	(1)	(1)	(1)	(1)	94.3	92.8	(1)	(1)	(1)	(1)
1924 average	(1)	(1)	(1)	(1)	98.2	97.8	(1)	(1)	(1)	(1)
1925 average	(1)	(1)	(1)	(1)	95.6	96.2	(1)	(1)	(1)	(1)
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	(1)	(1)	(1)	(1)	89.8	88.1	(1)	(1)	(1)	(1)
1928 average	(1)	(1)	(1)	(1)	80.1	75.9	(1)	(1)	(1)	(1)
1929 average	(1)	(1)	(1)	(1)	76.1	75.5	(1)	(1)	(1)	(1)
1930 average	(1)	(1)	(1)	(1)	67.4	65.6	(1)	(1)	(1)	(1)
1931 average	70.1	52.5	78.2	60.7	55.6	46.3	74.7	60.6	68.1	51.0
1932 average	55.7	28.7	64.1	36.5	33.8	19.7	68.1	46.9	58.2	31.3
1933 average	61.4	35.9	74.9	45.5	29.1	16.1	65.5	43.0	66.3	39.2
1931										
January	73.8	58.1	81.5	64.6	53.8	46.8	76.6	65.2	73.4	56.7
February	74.0	62.1	82.2	68.6	56.8	50.6	77.2	65.5	68.5	54.1
March	75.0	64.2	83.1	71.1	58.5	54.6	77.9	68.2	66.5	55.3
April	74.7	63.4	82.7	70.9	60.6	58.2	79.0	65.6	65.9	59.6
May	73.1	60.0	82.9	69.7	61.0	55.8	75.4	65.0	64.9	55.3
June	70.8	54.2	82.4	66.7	59.2	48.6	74.2	60.2	62.6	47.2
July	68.6	50.3	78.0	58.6	58.0	48.6	72.9	59.7	63.7	47.1
August	69.0	49.0	77.2	58.0	56.5	44.2	71.8	55.8	68.6	50.5
September	67.2	44.2	72.6	50.7	53.3	37.7	72.9	52.6	70.1	44.6
October	65.9	43.4	73.1	50.6	51.1	36.7	73.2	57.5	68.7	45.8
November	64.6	40.9	71.5	48.9	49.7	36.2	73.1	56.7	73.2	49.2
December	64.0	40.5	71.4	49.4	49.1	37.0	72.3	54.7	70.5	46.9
1932										
January	62.1	36.0	71.5	47.7	45.5	30.5	70.7	52.3	67.2	41.8
February	62.3	36.8	70.8	46.6	42.1	27.8	74.3	56.4	66.9	41.7
March	61.0	35.2	68.0	42.5	38.1	25.4	74.9	55.1	67.7	39.9
April	59.1	32.0	66.3	39.2	35.0	22.9	75.2	55.5	58.6	32.0
May	56.8	30.5	59.8	34.7	33.7	19.9	73.9	53.2	60.2	32.2
June	54.9	26.9	64.1	35.7	31.3	17.5	68.9	46.4	58.2	31.0
July	51.6	23.1	62.6	31.7	32.1	17.1	62.2	40.4	54.8	30.2
August	50.8	23.1	60.3	29.2	30.7	15.8	63.0	39.5	53.0	25.1
September	51.8	24.2	61.0	29.5	28.1	15.8	63.6	39.1	49.9	21.9
October	53.1	26.6	62.3	33.6	29.6	14.9	64.4	43.8	55.2	25.9
November	53.2	26.0	61.4	34.4	30.1	14.3	64.2	42.3	53.1	26.3
December	51.4	24.2	61.5	33.7	29.0	14.8	61.3	39.3	53.4	27.8
1933										
January	49.0	22.6	59.9	30.9	27.0	13.1	57.8	35.3	52.9	27.0
February	51.3	24.5	61.1	32.6	23.4	11.2	59.3	37.6	51.4	24.9
March	49.1	22.5	59.2	28.1	19.4	11.0	54.2	26.7	50.1	22.8
April	50.2	24.2	61.0	29.5	23.5	12.4	55.9	31.4	50.8	23.3
May	53.3	29.5	64.9	36.4	24.5	13.2	58.2	37.0	56.2	31.7
June	58.5	36.0	73.0	47.3	29.4	16.1	60.6	41.7	63.1	39.2
July	64.9	41.1	82.5	53.2	32.1	18.0	61.8	44.6	67.1	41.7
August	71.7	49.7	88.8	57.6	32.7	19.0	69.1	47.0	76.1	50.1
September	74.8	47.1	90.7	58.7	34.1	18.2	75.4	51.1	83.2	48.7
October	73.2	47.3	88.8	58.8	35.1	19.0	79.0	54.3	76.7	49.6
November	70.9	42.9	85.9	57.9	33.4	19.4	78.5	54.3	83.1	54.0
December	69.8	43.3	82.8	54.9	34.9	22.5	76.7	55.1	84.4	56.8

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING** INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Iron and steel and their products, not including machinery—Continued									
	Hardware		Iron and steel		Plumber's supplies		Steam and hot-water heating apparatus and steam fittings		Stoves	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	113.4	102.0	102.1	97.3	(1)	(1)	103.3	98.0	116.3	113.9
1924 average	104.2	95.7	95.4	91.3	(1)	(1)	98.6	95.4	100.3	101.0
1925 average	103.6	98.4	97.9	96.4	(1)	(1)	100.1	97.4	97.8	97.8
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	92.2	90.9	92.9	91.4	(1)	(1)	92.5	91.9	91.2	90.4
1928 average	88.9	88.4	90.9	92.7	(1)	(1)	82.2	81.9	87.6	84.7
1929 average	91.9	93.7	94.7	99.3	(1)	(1)	78.5	78.8	90.8	87.3
1930 average	78.8	68.5	84.5	79.8	(1)	(1)	65.2	58.7	74.3	64.1
1931 average	65.3	47.4	70.0	51.8	76.5	59.8	54.8	40.7	60.6	44.7
1932 average	52.3	27.8	55.9	25.7	60.1	34.3	37.5	22.4	49.2	28.5
1933 average	53.0	28.2	63.6	36.6	68.4	38.7	39.9	24.0	59.0	35.8
1931										
January	69.7	53.5	74.8	58.8	82.4	63.2	60.9	49.8	52.7	38.5
February	69.2	54.1	75.1	64.9	82.3	65.5	60.0	49.9	60.0	47.1
March	69.3	55.2	76.2	67.8	81.2	63.1	60.1	47.4	64.7	50.3
April	68.8	53.6	76.2	67.3	76.7	59.2	57.7	44.7	65.4	50.0
May	68.0	53.2	74.2	62.1	75.8	60.6	55.8	41.9	64.8	50.3
June	66.7	48.8	70.7	54.1	76.0	60.2	54.6	40.0	62.6	46.0
July	64.4	44.3	69.7	48.3	77.2	63.5	53.2	38.5	54.8	39.4
August	62.0	44.2	68.2	46.2	75.0	62.9	51.4	37.4	60.0	43.4
September	61.5	39.3	65.6	40.4	73.2	56.1	51.0	34.3	63.8	48.0
October	61.8	42.2	63.5	38.3	75.0	59.6	53.4	38.3	64.3	48.7
November	61.2	40.8	62.5	36.3	73.1	52.7	51.4	34.3	60.0	41.0
December	60.4	40.1	63.0	37.1	70.0	50.4	48.0	31.5	53.5	33.8
1932										
January	59.3	37.8	62.5	32.9	70.6	43.3	44.1	26.9	44.4	26.4
February	58.5	36.0	62.8	34.3	68.9	42.7	45.0	28.4	50.6	30.7
March	57.6	34.8	61.6	32.8	65.5	39.2	43.6	26.0	51.4	30.6
April	55.9	31.2	59.8	29.4	64.7	37.5	39.2	23.7	51.6	29.4
May	53.3	28.1	57.6	28.3	64.1	37.4	33.8	20.4	49.9	28.1
June	52.4	26.9	54.9	23.3	63.6	37.3	33.7	20.5	46.3	25.1
July	47.6	21.6	51.7	19.7	61.4	30.9	32.5	18.5	40.7	21.7
August	46.4	20.9	50.4	19.5	59.0	34.4	33.1	18.8	43.7	23.8
September	48.2	22.7	51.3	20.4	50.?	27.5	35.5	20.4	51.7	31.6
October	49.2	24.3	53.0	23.2	51.2	28.7	37.3	23.6	55.4	37.2
November	49.9	24.5	53.2	23.0	55.5	31.8	38.4	22.3	55.0	31.7
December	49.8	25.0	52.1	21.9	46.1	21.1	34.0	19.0	49.5	25.8
1933										
January	48.3	22.4	50.6	21.4	44.1	19.3	31.3	16.7	37.8	18.5
February	49.0	23.2	53.0	23.6	54.5	25.9	34.8	18.2	43.0	23.2
March	47.0	20.7	50.1	21.3	58.8	32.5	30.5	16.0	41.9	21.7
April	47.2	21.0	51.3	23.3	53.4	27.3	34.0	18.0	45.1	25.0
May	48.6	24.6	54.2	28.7	66.8	41.7	36.7	21.8	48.7	29.2
June	52.6	29.5	59.4	35.9	77.9	51.9	40.0	25.1	53.4	33.6
July	55.9	33.2	67.6	42.8	81.7	48.5	43.0	27.4	60.2	38.1
August	59.9	34.5	75.9	54.8	80.9	48.7	46.6	30.6	69.1	43.9
September	59.0	33.2	78.1	49.3	87.6	53.3	48.3	30.3	78.3	50.2
October	55.3	30.6	76.4	49.5	81.6	46.5	44.6	27.8	82.7	56.4
November	55.0	30.5	73.8	43.6	68.8	34.3	45.4	27.8	80.3	50.4
December	58.0	35.3	72.9	44.4	65.6	34.0	43.8	27.9	68.0	39.3

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Iron and steel and their products, not including machinery—Con.							
	Structural and ornamental metal work		Tin cans and other tinware		Tools (not including edge or machine tools)		Wirework	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	100.8	93.9	(1)	(1)	(1)	(1)	(1)	(1)
1924 average	91.7	86.3	(1)	(1)	(1)	(1)	(1)	(1)
1925 average	92.5	91.5	(1)	(1)	(1)	(1)	(1)	(1)
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	94.9	95.0	(1)	(1)	(1)	(1)	(1)	(1)
1928 average	95.0	97.9	(1)	(1)	(1)	(1)	(1)	(1)
1929 average	102.1	104.4	(1)	(1)	(1)	(1)	(1)	(1)
1930 average	92.2	89.0	(1)	(1)	(1)	(1)	(1)	(1)
1931 average	71.1	57.4	84.6	56.7	85.4	61.3	99.1	87.5
1932 average	47.6	28.7	74.7	45.8	65.8	38.6	93.6	67.2
1933 average	43.3	24.2	79.6	48.1	69.1	41.6	107.0	82.2
1931								
January	78.9	67.4	87.2	59.7	88.8	63.4	91.4	81.1
February	75.8	64.6	88.7	58.2	88.2	65.9	89.1	81.8
March	75.4	63.9	88.8	61.8	88.6	66.9	92.3	88.9
April	74.1	60.7	91.1	63.3	88.5	67.2	93.2	85.6
May	72.5	60.8	89.4	59.3	85.4	64.8	94.4	87.4
June	71.2	58.7	87.0	58.2	85.6	62.2	96.4	89.0
July	71.9	61.0	86.7	57.7	86.2	61.3	97.8	87.3
August	72.1	57.8	87.6	57.6	82.4	57.9	108.1	95.8
September	69.3	54.1	81.7	55.3	84.3	54.8	105.5	88.0
October	65.6	49.0	77.1	51.1	82.9	57.9	106.4	90.8
November	63.7	46.1	74.2	48.7	81.4	56.2	107.9	87.7
December	62.2	44.5	76.2	49.2	82.2	56.5	106.8	87.1
1932								
January	58.8	40.3	74.4	48.0	77.5	49.6	100.6	77.1
February	55.6	36.6	72.8	45.3	76.8	50.9	102.3	85.2
March	54.3	34.4	73.4	46.7	73.2	47.4	98.1	81.8
April	51.9	32.4	73.7	46.0	71.8	44.3	95.2	70.9
May	49.4	30.4	71.9	43.8	68.8	40.2	94.4	71.2
June	47.7	27.1	76.7	46.8	65.3	37.6	93.7	65.9
July	45.2	25.0	75.1	43.5	59.2	29.1	87.3	53.4
August	44.6	25.0	75.5	45.2	54.4	26.6	90.2	59.5
September	42.7	23.9	81.2	52.4	59.0	32.4	92.7	63.2
October	41.2	23.6	76.8	47.4	60.2	35.1	91.5	64.4
November	40.3	23.5	73.2	41.7	61.8	35.7	90.1	61.3
December	40.0	21.8	71.1	42.5	61.1	34.7	87.3	52.8
1933								
January	38.1	18.5	67.7	39.8	59.4	33.0	84.7	50.6
February	37.3	17.4	70.3	39.7	59.2	30.6	89.1	58.6
March	37.8	17.2	68.4	38.4	55.7	27.2	87.4	52.1
April	38.5	18.5	71.3	41.3	56.1	27.2	87.5	58.3
May	38.0	19.8	73.8	45.7	58.0	31.0	93.0	72.3
June	39.4	21.0	78.9	50.3	63.0	40.0	104.3	87.5
July	42.6	22.1	82.7	52.8	69.9	46.0	113.5	97.1
August	46.1	27.4	90.8	55.0	77.5	50.0	122.0	112.2
September	50.6	31.1	93.4	55.8	80.2	51.5	128.8	102.2
October	51.2	33.0	85.9	51.5	83.1	54.0	128.2	103.9
November	50.0	32.6	84.9	50.9	83.3	53.8	122.5	92.1
December	49.4	31.4	87.4	55.5	83.2	54.5	123.0	99.5

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING** INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Machinery, not including transportation equipment									
	Group index		Agricultural implements		Cash registers, adding machines, and calculating machines		Electrical machinery, apparatus, and supplies		Engines, turbines, tractors, and water-wheels	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	(1)	(1)	101.3	89.8	(1)	(1)	101.3	97.0	(1)	(1)
1924 average	(1)	(1)	81.2	75.2	(1)	(1)	95.1	94.7	(1)	(1)
1925 average	(1)	(1)	93.6	90.8	(1)	(1)	92.1	92.2	(1)	(1)
1926 average	**100.0**	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	(1)	(1)	91.9	92.2	(1)	(1)	95.1	95.7	94.4	91.7
1928 average	(1)	(1)	106.8	111.8	(1)	(1)	93.9	95.9	97.4	96.3
1929 average	(1)	(1)	121.1	125.3	(1)	(1)	118.3	121.5	112.1	113.5
1930 average	(1)	(1)	92.3	85.6	(1)	(1)	101.6	102.0	99.0	94.0
1931 average	**70.7**	**56.6**	47.8	37.4	80.6	67.9	80.9	71.4	67.6	54.0
1932 average	**50.9**	**32.2**	28.2	21.3	69.6	49.8	58.9	41.9	44.0	27.6
1933 average	**52.3**	**33.3**	32.0	24.7	73.4	55.4	53.3	37.9	46.5	29.6
1931										
January	**79.2**	**65.5**	77.6	66.8	86.4	76.4	87.9	78.8	83.2	71.3
February	**79.0**	**66.9**	75.8	66.6	84.3	73.8	87.7	80.5	82.3	73.2
March	**77.5**	**66.5**	66.4	53.7	83.7	73.8	87.0	80.5	81.4	72.4
April	**76.2**	**64.5**	59.9	43.6	83.6	73.2	86.2	78.9	76.2	66.0
May	**74.3**	**63.0**	49.7	36.3	82.0	72.7	84.3	78.1	68.7	58.8
June	**71.8**	**58.4**	43.9	32.0	81.0	72.2	82.4	73.0	66.7	54.7
July	**68.8**	**53.8**	35.2	27.6	77.0	63.1	79.7	68.9	64.9	48.7
August	**66.2**	**51.7**	31.3	24.0	80.9	68.0	77.1	69.0	60.7	43.7
September	**66.2**	**48.4**	31.0	23.2	77.9	57.6	77.3	64.3	57.5	40.8
October	**64.4**	**47.9**	32.0	23.5	76.5	60.8	75.6	62.7	56.8	40.1
November	**62.9**	**46.1**	34.2	24.8	76.7	61.0	73.3	61.7	55.1	38.3
December	**62.4**	**46.3**	36.8	26.7	76.8	62.3	72.7	60.5	57.2	39.7
1932										
January	**59.8**	**42.4**	38.8	27.6	77.7	59.6	71.9	57.9	44.2	30.7
February	**59.8**	**42.3**	41.4	35.3	77.3	55.7	70.8	56.5	52.0	34.8
March	**58.1**	**39.8**	40.8	34.0	75.3	54.5	69.3	53.2	51.4	33.9
April	**55.3**	**36.7**	36.4	28.2	73.7	52.3	65.7	48.9	48.5	32.1
May	**53.1**	**33.9**	28.5	22.7	74.3	51.9	63.1	44.5	46.6	29.5
June	**50.1**	**30.6**	22.1	16.4	71.1	47.5	59.6	40.9	45.0	27.6
July	**47.3**	**27.4**	19.8	14.0	70.4	47.0	55.5	37.0	41.7	23.9
August	**45.2**	**25.7**	21.7	15.5	62.1	45.1	53.5	33.4	39.4	23.1
September	**45.3**	**26.2**	21.0	14.6	62.9	45.4	50.6	32.9	39.3	22.6
October	**45.6**	**27.1**	19.4	14.0	63.8	46.8	49.3	32.8	39.8	24.9
November	**45.8**	**26.7**	22.6	15.7	63.4	45.6	49.1	32.5	39.7	23.6
December	**45.4**	**27.0**	26.0	18.0	63.1	45.6	48.6	32.5	40.1	25.0
1933										
January	**43.4**	**25.0**	27.4	18.9	62.2	42.9	46.4	30.5	39.9	24.3
February	**43.9**	**25.4**	29.9	21.6	62.5	42.7	46.4	30.3	40.0	24.7
March	**42.4**	**23.2**	28.8	19.0	61.5	41.0	45.3	28.9	37.9	22.8
April	**42.8**	**23.9**	27.6	18.5	62.4	44.9	45.7	30.0	38.2	23.1
May	**44.6**	**27.0**	25.5	18.4	64.6	48.1	47.3	33.0	38.5	23.9
June	**48.2**	**31.3**	27.7	21.7	70.6	53.5	49.8	36.6	42.4	27.9
July	**51.9**	**34.6**	28.9	21.6	73.8	56.9	53.4	40.4	45.4	29.5
August	**57.4**	**38.2**	31.3	24.3	79.7	61.0	57.1	42.4	45.2	27.7
September	**61.7**	**40.8**	34.7	27.2	83.7	64.4	60.7	44.7	55.2	34.1
October	**64.0**	**43.6**	37.7	31.1	85.7	67.4	62.9	46.9	55.4	36.4
November	**64.1**	**43.5**	40.4	35.2	86.7	70.4	62.6	46.6	58.5	38.6
December	**63.1**	**42.9**	44.1	39.3	87.2	72.1	61.7	44.9	61.5	42.7

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Machinery, not including transportation equipment—Continued									
	Foundry and machine-shop products		Machine tools		Radios and phonographs		Textile machinery and parts		Typewriters and supplies	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	(1)	(1)	98.1	88.5	(1)	(1)	(1)	(1)	(1)	(1)
1924 average	(1)	(1)	82.0	74.9	(1)	(1)	(1)	(1)	(1)	(1)
1925 average	(1)	(1)	85.8	83.4	(1)	(1)	(1)	(1)	(1)	(1)
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	93.8	92.1	92.8	92.2	(1)	(1)	95.1	95.5	(1)	(1)
1928 average	93.7	93.9	100.8	107.5	(1)	(1)	92.4	93.5	(1)	(1)
1929 average	104.3	107.6	129.8	139.8	213.1	213.0	111.6	121.1	(1)	(1)
1930 average	87.9	80.7	98.7	90.2	123.3	130.3	91.3	84.7	(1)	(1)
1931 average	65.8	49.2	62.6	48.4	92.5	86.0	73.5	61.2	81.4	60.9
1932 average	47.9	27.1	35.9	22.9	68.2	55.0	56.3	37.7	61.3	35.7
1933 average	50.0	28.7	37.0	24.1	103.2	74.9	70.7	50.0	65.6	43.1
1931										
January	72.8	56.8	74.4	56.6	100.3	92.2	76.8	67.7	90.6	71.4
February	73.1	58.9	73.0	57.6	94.9	84.9	77.5	67.9	89.2	70.3
March	72.4	59.5	72.9	58.3	74.6	73.9	78.1	68.0	89.1	67.6
April	71.4	57.8	70.8	56.1	81.8	81.0	76.9	64.8	84.2	67.0
May	71.0	56.8	68.7	54.5	75.4	78.9	76.5	66.7	82.9	67.0
June	67.8	51.7	65.3	50.6	82.1	81.7	74.5	64.1	82.5	65.1
July	64.6	46.9	61.1	49.1	90.6	84.4	67.5	56.5	78.5	58.3
August	61.1	43.3	54.3	44.1	99.2	92.8	74.5	61.4	76.4	54.5
September	60.8	40.8	55.8	39.8	114.1	95.3	72.6	54.4	76.6	51.8
October	58.7	40.1	54.4	40.2	111.5	106.7	69.7	53.2	73.6	53.0
November	57.7	38.4	50.2	36.6	104.1	86.5	68.7	52.1	75.8	53.5
December	57.7	39.3	50.1	37.2	81.0	73.3	68.3	58.1	77.2	51.0
1932										
January	55.0	34.5	47.8	34.8	77.9	73.0	68.0	56.9	74.1	46.3
February	54.7	34.9	47.3	34.4	72.0	61.4	68.7	55.6	72.1	48.3
March	53.2	33.1	44.6	30.1	64.1	51.1	66.1	50.6	71.4	45.8
April	51.2	30.8	40.5	26.6	57.3	46.3	61.3	43.7	70.6	43.5
May	49.6	29.1	35.5	22.0	61.0	53.6	56.0	33.7	68.4	38.2
June	46.9	26.1	34.5	20.3	63.9	54.0	52.0	27.4	58.9	31.6
July	45.3	23.3	30.7	17.8	62.5	47.8	41.5	21.6	57.2	28.9
August	42.8	21.9	28.6	16.9	63.1	44.9	49.3	28.9	40.7	21.7
September	43.4	22.2	30.2	17.7	68.1	56.1	52.3	33.0	55.8	29.1
October	44.0	23.3	29.6	17.1	79.8	62.9	53.6	34.0	55.9	30.4
November	44.3	23.0	30.5	18.3	77.7	58.4	52.9	32.2	59.2	32.7
December	44.1	23.3	31.3	18.8	70.4	50.9	54.2	34.6	51.8	32.1
1933										
January	41.6	20.9	31.7	19.6	57.9	41.9	54.5	33.8	57.4	32.7
February	42.3	21.6	31.0	18.8	61.9	45.5	55.0	32.7	53.8	29.8
March	40.8	19.4	27.3	15.0	61.0	42.0	53.2	29.2	52.0	27.5
April	41.3	19.7	26.9	14.7	67.2	50.5	51.3	28.3	52.4	26.3
May	43.0	23.0	27.8	15.5	81.3	62.3	54.1	33.5	55.1	30.4
June	46.5	27.3	31.2	20.2	92.1	65.5	62.5	47.2	54.0	31.7
July	50.3	30.8	33.3	22.0	94.1	55.7	72.9	58.9	57.7	36.4
August	56.4	34.8	39.1	25.6	108.2	73.9	87.9	65.7	69.6	49.6
September	59.2	36.1	44.5	30.1	133.6	91.2	90.8	69.1	76.1	55 0
October	60.4	37.8	48.0	33.1	162.4	125.2	90.0	69.3	81.2	61.3
November	59.4	36.5	51.2	36.2	169.3	131.9	89.5	68.1	87.7	65.2
December	58.2	36.1	52.3	37.8	149.6	112.6	86.6	64.5	89.8	71.0

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING** INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Nonferrous metals and their products											
	Group index		Aluminum manufactures		Brass, bronze, and copper products		Clocks, watches, and time-recording devices		Jewelry		Lighting equipment	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	(1)	(1)	(1)	(1)	101.3	98.9	(1)	(1)	(1)	(1)	(1)	(1)
1924 average	(1)	(1)	(1)	(1)	95.2	92.9	(1)	(1)	(1)	(1)	(1)	(1)
1925 average	(1)	(1)	(1)	(1)	99.2	99.1	(1)	(1)	(1)	(1)	(1)	(1)
1926 average	**100.0**	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	(1)	(1)	(1)	(1)	94.5	92.0	(1)	(1)	(1)	(1)	(1)	(1)
1928 average	(1)	(1)	(1)	(1)	94.4	98.0	(1)	(1)	(1)	(1)	(1)	(1)
1929 average	(1)	(1)	(1)	(1)	101.1	107.4	(1)	(1)	(1)	(1)	(1)	(1)
1930 average	(1)	(1)	(1)	(1)	79.7	74.9	(1)	(1)	(1)	(1)	(1)	(1)
1931 average	**68.3**	**58.5**	69.5	56.9	66.7	54.2	61.1	52.6	50.8	41.7	89.3	76.9
1932 average	**55.2**	**37.1**	49.6	29.5	53.9	33.7	44.9	29.9	39.5	27.7	67.7	49.4
1933 average	**59.7**	**39.7**	55.4	35.7	59.9	38.9	42.6	29.1	38.0	25.2	70.3	49.3
1931												
January	**71.7**	**63.3**	75.6	59.1	70.2	60.1	63.5	58.8	52.4	45.5	93.7	84.4
February	**72.4**	**67.2**	79.1	74.6	69.8	60.6	63.2	58.7	53.9	42.8	93.5	81.0
March	**72.3**	**69.0**	80.3	76.1	70.7	62.7	62.7	57.9	52.7	45.7	92.8	82.4
April	**71.8**	**66.8**	80.7	74.7	69.7	61.5	61.8	53.3	52.1	43.8	92.8	82.4
May	**70.3**	**63.9**	78.4	67.1	69.5	60.7	59.8	50.4	50.4	41.8	91.0	80.3
June	**69.3**	**60.4**	76.8	63.7	67.7	56.3	57.4	48.9	49.7	40.7	90.0	79.7
July	**67.3**	**53.4**	75.9	60.5	66.3	52.2	58.1	46.8	48.8	33.9	88.0	76.5
August	**65.3**	**53.2**	60.6	46.7	64.2	50.0	57.9	49.6	49.6	39.6	88.5	74.1
September	**65.9**	**53.0**	58.9	45.7	64.4	47.7	61.5	54.0	52.5	43.1	88.5	73.5
October	**65.6**	**53.1**	58.2	38.3	63.3	47.0	62.3	54.3	52.2	43.8	85.0	71.2
November	**64.3**	**49.8**	55.0	36.9	62.6	46.1	63.6	53.1	49.2	40.3	85.4	68.8
December	**63.2**	**49.2**	54.8	39.4	62.3	45.6	61.7	45.0	46.0	39.9	82.9	68.5
1932												
January	**60.8**	**44.4**	54.6	38.7	60.9	43.5	56.0	37.8	41.7	33.3	77.5	59.2
February	**61.4**	**45.6**	55.1	39.3	60.8	43.4	54.7	38.0	43.8	34.6	76.4	58.9
March	**60.6**	**43.1**	55.5	33.1	59.6	40.1	52.0	33.1	43.3	31.9	74.7	57.8
April	**58.0**	**39.9**	52.7	31.5	56.3	35.9	47.7	32.4	40.6	27.9	72.8	53.6
May	**55.4**	**36.7**	48.6	26.8	53.9	32.9	44.7	26.8	37.1	24.2	68.6	50.1
June	**53.7**	**34.4**	46.7	23.9	51.9	30.7	42.5	26.1	35.8	22.9	68.5	50.7
July	**48.9**	**29.9**	44.4	21.8	49.8	28.6	30.6	19.0	31.0	19.6	48.3	34.2
August	**50.2**	**30.6**	46.3	23.5	49.3	27.8	41.6	26.4	35.4	21.9	60.6	41.4
September	**52.4**	**33.6**	47.5	25.8	50.3	29.3	40.1	26.9	40.7	27.9	63.2	45.1
October	**54.0**	**37.0**	47.7	29.5	51.1	31.5	41.6	31.4	44.0	32.6	66.6	46.8
November	**54.4**	**36.1**	48.3	30.5	51.9	31.0	43.5	32.5	42.7	29.2	67.5	48.5
December	**53.1**	**33.6**	47.5	29.0	51.0	29.6	43.3	28.4	37.5	26.8	67.2	46.6
1933												
January	**50.1**	**29.9**	46.8	28.0	48.6	27.1	39.1	23.0	33.0	20.9	62.6	42.5
February	**50.8**	**30.4**	47.8	29.6	48.7	26.5	38.0	22.3	34.8	21.1	60.5	40.4
March	**48.7**	**28.1**	47.6	28.5	46.0	24.3	34.9	16.6	33.2	19.1	55.7	35.1
April	**49.9**	**29.4**	48.1	28.0	47.8	26.4	33.5	16.6	33.1	20.0	57.9	36.6
May	**52.0**	**34.2**	49.4	31.5	51.5	33.6	35.7	19.6	33.8	21.4	60.5	41.9
June	**55.8**	**38.5**	52.2	35.3	57.7	40.2	40.0	23.9	36.0	22.9	64.8	47.8
July	**59.5**	**40.9**	55.7	37.2	64.5	46.0	40.6	27.9	34.2	22.0	68.6	49.8
August	**66.9**	**45.6**	62.0	41.4	71.1	49.9	46.0	33.1	40.1	26.0	75.8	53.5
September	**71.8**	**49.0**	65.1	41.7	73.0	50.9	49.9	38.6	45.2	31.2	82.1	58.6
October	**73.0**	**51.4**	64.2	43.6	72.4	49.5	52.6	43.7	47.8	34.7	84.1	59.4
November	**70.1**	**50.2**	63.0	42.1	69.8	46.5	52.7	44.6	44.6	33.0	85.5	62.1
December	**67.7**	**48.4**	62.4	41.0	67.2	46.3	48.0	38.8	40.7	30.2	85.2	64.0

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Nonferrous metals, and their products—Continued						Transportation equipment					
	Silverware and plated ware		Smelting and refining—copper, lead, and zinc		Stamped and enameled ware		Group index		Aircraft		Automobiles	
	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals
1923 average	(1)	(1)	(1)	(1)	105.2	109.3	(1)	(1)	(1)	(1)	93.0	92.0
1924 average	(1)	(1)	(1)	(1)	94.7	93.2	(1)	(1)	(1)	(1)	87.0	83.8
1925 average	(1)	(1)	(1)	(1)	99.0	100.2	(1)	(1)	(1)	(1)	99.0	102.4
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	**100.0**	**100.0**	100.0	100.0	100.0	100.0
1927 average	(1)	(1)	(1)	(1)	88.9	90.6	(1)	(1)	(1)	(1)	91.2	90.3
1928 average	(1)	(1)	(1)	(1)	88.8	90.4	(1)	(1)	(1)	(1)	111.3	114.4
1929 average	(1)	(1)	(1)	(1)	90.4	91.1	(1)	(1)	(1)	(1)	116.9	118.7
1930 average	(1)	(1)	(1)	(1)	77.9	71.8	(1)	(1)	(1)	(1)	83.7	74.6
1931 average	74.3	59.1	73.5	69.3	70.6	58.8	**66.8**	**53.5**	272.8	283.8	67.7	53.0
1932 average	61.8	40.5	61.1	41.2	62.1	41.2	**54.0**	**38.9**	196.0	200.8	55.2	38.9
1933 average	63.4	39.5	68.4	44.1	68.1	43.9	**52.2**	**37.6**	230.6	215.6	54.2	39.3
1931												
January	77.8	58.6	81.8	87.7	68.6	54.8	**70.2**	**43.7**	313.5	305.6	69.9	38.9
February	79.9	67.4	79.7	85.8	72.7	67.0	**70.9**	**59.9**	298.5	301.6	71.5	59.4
March	80.0	68.6	78.1	90.2	72.7	67.3	**73.7**	**65.0**	303.2	335.1	75.2	65.9
April	76.2	65.7	77.7	83.1	73.8	67.3	**75.1**	**67.5**	292.9	309.0	76.8	68.8
May	75.5	60.8	74.6	79.5	72.3	63.9	**76.1**	**70.8**	302.3	320.1	79.1	73.5
June	75.8	56.9	73.5	74.3	72.6	62.0	**72.4**	**59.8**	317.7	341.2	74.3	60.4
July	70.5	51.2	69.3	51.7	70.8	55.6	**67.5**	**51.9**	274.2	281.2	68.8	51.8
August	71.2	54.9	68.0	55.7	70.2	56.7	**65.3**	**49.3**	236.9	242.4	67.0	49.0
September	71.3	57.6	68.1	55.3	70.7	56.3	**64.1**	**42.1**	244.0	245.8	65.4	40.4
October	71.6	61.1	71.4	59.7	69.2	54.5	**52.8**	**42.0**	225.0	230.8	51.7	40.3
November	71.1	51.5	70.5	57.0	66.9	50.9	**52.4**	**42.4**	229.9	249.7	51.1	41.2
December	70.6	54.5	69.1	52.0	66.2	49.8	**60.8**	**47.1**	235.4	243.5	61.6	46.7
1932												
January	64.3	44.0	69.3	50.5	63.0	43.5	**62.7**	**46.3**	228.2	233.5	64.9	46.4
February	65.1	46.6	69.1	51.3	65.6	48.1	**64.8**	**49.8**	224.5	227.9	67.2	50.6
March	64.6	46.6	66.8	45.9	67.1	49.4	**63.3**	**49.0**	229.9	234.5	65.2	49.9
April	63.7	43.4	64.7	44.1	65.2	46.6	**59.4**	**46.2**	214.3	218.8	60.2	45.8
May	61.9	39.0	61.8	42.9	64.3	43.8	**59.6**	**50.2**	208.3	206.7	61.1	52.1
June	60.6	36.3	60.5	40.1	61.8	40.6	**59.0**	**44.6**	196.6	202.6	61.0	45.8
July	53.3	31.8	58.0	36.7	56.7	33.8	**56.8**	**41.4**	180.5	181.3	59.2	42.3
August	57.5	34.0	53.9	33.1	57.0	34.6	**50.5**	**32.0**	170.7	183.2	52.0	31.8
September	60.5	37.9	54.9	35.7	61.7	40.0	**45.0**	**23.6**	161.5	167.2	45.3	21.6
October	63.7	45.5	58.8	39.3	60.4	40.1	**39.5**	**24.7**	166.8	174.1	38.2	22.7
November	64.0	43.4	57.0	37.5	62.9	39.2	**42.1**	**27.7**	183.5	186.3	41.5	26.9
December	62.2	37.8	58.8	37.7	59.7	34.6	**45.7**	**31.4**	187.6	193.5	46.2	31.1
1933												
January	55.1	30.0	58.7	36.8	54.8	30.8	**49.5**	**34.1**	182.7	181.1	51.6	35.3
February	58.7	31.8	55.9	35.0	60.5	35.9	**48.5**	**30.6**	185.8	187.7	50.8	31.3
March	58.0	31.3	56.6	33.4	55.9	31.7	**43.5**	**26.3**	196.4	197.4	44.9	26.3
April	56.8	30.3	56.8	35.0	59.8	35.1	**43.6**	**30.2**	206.4	205.7	45.4	31.4
May	59.1	35.0	56.5	36.4	62.4	39.2	**46.9**	**36.9**	244.8	232.5	48.9	39.3
June	60.2	37.0	56.8	38.6	67.1	43.4	**49.9**	**39.0**	251.2	233.1	52.8	42.1
July	50.4	31.4	63.8	45.6	71.2	45.3	**56.2**	**41.7**	251.4	223.4	59.8	44.8
August	56.9	35.8	74.4	51.2	79.5	52.3	**59.1**	**47.5**	241.8	226.0	62.3	51.1
September	70.6	46.0	84.4	53.8	82.3	52.7	**61.8**	**46.0**	238.7	207.5	64.9	48.7
October	77.5	55.2	86.3	55.9	83.1	55.9	**56.9**	**41.2**	247.3	222.6	58.2	42.2
November	80.6	56.7	86.7	55.2	71.0	53.4	**51.3**	**36.4**	260.7	239.3	51.3	36.3
December	76.6	52.9	84.2	51.9	69.7	51.2	**58.7**	**41.5**	259.9	231.0	59.9	42.2

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING** INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Transportation equipment—Contd.						Railroad repair shops					
	Cars, electric and steam-railroad		Locomotives		Shipbuilding		Group index		Electric railroad		Steam railroad	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	(1)	(1)	(1)	(1)	108.6	103.0	(1)	(1)	(1)	(1)	(1)	(1)
1924 average	(1)	(1)	(1)	(1)	90.2	88.8	(1)	(1)	(1)	(1)	(1)	(1)
1925 average	(1)	(1)	(1)	(1)	92.6	90.3	(1)	(1)	(1)	(1)	(1)	(1)
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	**100.0**	**100.0**	100.0	100.0	100.0	100.0
1927 average	79.1	79.1	79.5	73.1	104.8	105.8	**93.0**	**95.3**	100.4	99.9	92.4	94.9
1928 average	63.4	60.8	56.1	50.4	82.8	83.0	**87.4**	**90.0**	96.5	97.4	86.7	89.5
1929 average	83.1	84.1	70.5	72.0	105.3	108.1	**86.0**	**93.5**	93.7	95.2	85.4	93.4
1930 average	68.1	65.4	62.9	63.6	114.9	116.4	**74.6**	**77.0**	89.0	89.3	73.5	76.0
1931 average	27.5	18.9	28.6	25.2	95.8	88.0	**61.7**	**58.9**	78.1	75.0	60.4	57.6
1932 average	20.2	12.2	17.6	13.7	79.1	63.9	**49.6**	**39.1**	68.9	59.2	48.1	37.6
1933 average	19.5	10.7	14.1	9.0	66.3	47.4	**48.3**	**38.2**	63.7	50.7	47.1	37.2
1931												
January	33.9	26.1	33.4	26.1	103.7	98.3	**68.5**	**64.2**	82.5	79.4	67.4	63.0
February	32.5	25.0	33.9	28.3	100.3	96.2	**67.7**	**68.1**	82.4	80.5	66.6	67.1
March	32.8	24.2	36.7	32.9	97.6	92.3	**66.1**	**66.5**	82.1	81.6	64.9	65.3
April	33.2	24.6	34.6	31.7	100.3	94.9	**65.3**	**66.0**	81.6	80.2	64.0	64.9
May	26.4	17.8	31.0	28.5	98.2	96.6	**64.3**	**63.9**	80.6	78.6	63.0	62.8
June	27.5	18.1	29.6	27.9	98.0	89.8	**62.5**	**61.1**	79.3	76.8	61.2	59.9
July	26.5	16.4	28.8	26.1	94.8	84.0	**60.3**	**56.6**	77.0	73.2	59.0	55.3
August	27.0	17.7	26.4	23.1	88.9	81.4	**59.2**	**55.2**	75.0	70.0	58.0	54.1
September	26.3	17.8	24.5	21.9	90.5	77.4	**58.4**	**52.4**	74.8	68.5	57.1	51.1
October	22.8	14.7	22.1	19.2	89.8	82.0	**57.2**	**51.7**	74.2	69.4	55.9	50.3
November	20.2	12.4	21.1	17.8	93.3	80.0	**55.6**	**51.1**	74.2	70.8	54.2	49.6
December	20.8	12.4	21.5	18.8	93.9	83.3	**54.9**	**49.6**	73.6	70.5	53.4	48.0
1932												
January	17.5	10.3	20.8	17.4	90.1	79.7	**51.5**	**44.4**	73.3	67.4	49.8	42.6
February	21.3	13.7	21.1	17.9	90.0	77.8	**52.2**	**42.6**	72.4	65.2	50.6	40.9
March	22.8	14.8	20.6	18.2	88.7	73.7	**52.5**	**42.9**	71.4	65.8	51.0	41.1
April	22.0	14.1	21.4	18.4	91.1	80.4	**52.9**	**43.3**	71.3	64.6	51.5	41.6
May	20.5	13.0	20.2	17.0	87.0	69.7	**51.4**	**43.2**	70.0	62.5	50.0	41.7
June	19.0	11.3	18.0	14.3	83.9	66.2	**48.3**	**38.3**	69.4	60.9	46.7	36.5
July	19.7	11.4	16.6	12.1	76.2	63.7	**47.1**	**34.2**	68.2	57.1	45.5	32.4
August	18.6	11.1	15.9	11.6	71.5	52.6	**44.8**	**33.0**	66.7	54.6	43.1	31.3
September	19.3	11.1	14.5	9.4	69.0	51.6	**46.5**	**33.5**	66.5	53.7	44.9	31.9
October	21.1	12.4	13.8	9.4	67.7	52.4	**48.6**	**36.2**	65.5	51.8	47.3	35.0
November	21.1	11.7	14.1	9.7	66.7	47.9	**50.2**	**39.1**	65.6	52.5	49.0	38.1
December	20.0	11.6	13.9	9.5	66.8	51.5	**49.5**	**39.0**	65.9	54.5	48.2	37.8
1933												
January	18.0	10.0	12.7	8.3	65.0	45.8	**48.1**	**35.8**	65.6	52.9	46.7	34.5
February	17.2	9.0	11.8	7.6	61.1	43.4	**47.3**	**35.9**	65.0	52.5	45.9	34.6
March	17.2	9.2	10.3	6.5	57.8	39.6	**47.0**	**34.8**	64.4	52.1	45.7	33.5
April	17.4	9.6	10.0	6.1	53.2	36.7	**44.8**	**33.2**	64.0	49.7	43.3	31.9
May	17.5	9.3	9.9	6.2	57.0	39.6	**46.2**	**35.6**	63.6	51.1	44.9	34.4
June	15.2	7.5	10.6	6.8	57.5	39.6	**45.0**	**34.9**	63.0	49.8	43.6	33.7
July	19.0	9.4	11.9	8.2	62.7	44.1	**48.0**	**36.5**	62.6	48.7	46.9	35.6
August	22.6	12.6	15.8	9.3	69.0	48.7	**50.3**	**42.0**	62.1	49.1	49.4	41.4
September	21.9	12.0	16.8	10.2	76.9	55.8	**51.1**	**41.4**	62.5	48.8	50.2	40.8
October	21.4	12.6	20.3	13.2	79.1	57.8	**51.0**	**44.7**	63.2	50.0	50.1	44.3
November	21.9	12.7	20.2	13.5	76.1	57.0	**50.8**	**42.1**	64.0	51.7	49.8	41.4
December	24.5	14.2	18.7	12.1	80.6	60.1	**49.7**	**40.9**	64.1	52.3	48.6	40.0

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Lumber and allied products									
	Group index		Furniture		Lumber, sawmills		Lumber, millwork		Turpentine and rosin	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	(1)	(1)	100.4	94.2	115.1	106.5	101.5	95.5	(1)	(1)
1924 average	(1)	(1)	95.2	90.7	108.0	102.8	101.2	98.0	(1)	(1)
1925 average	(1)	(1)	99.1	95.6	103.6	101.7	103.0	101.8	(1)	(1)
1926 average	**100.0**	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	(1)	(1)	96.1	98.2	91.0	92.4	89.2	89.2	(1)	(1)
1928 average	(1)	(1)	92.5	93.2	86.7	88.0	85.5	85.6	(1)	(1)
1929 average	(1)	(1)	95.9	97.0	85.9	86.9	83.1	82.8	(1)	(1)
1930 average	(1)	(1)	75.2	66.6	67.7	65.0	63.9	61.0	(1)	(1)
1931 average	**52.0**	**41.0**	61.0	46.6	48.3	37.1	52.2	43.0	55.1	54.8
1932 average	**38.7**	**21.9**	47.3	26.4	35.5	18 9	36.9	22.7	44.7	37.7
1933 average	**41.5**	**23.2**	50.4	27.6	38.8	21.3	35.9	20.5	51.9	41.9
1931										
January	**54.3**	**43.4**	62.7	48.4	50.9	40.0	53.6	44.9	60.3	55.1
February	**54.4**	**45.1**	63.7	52.2	50.6	40.3	54.8	47.1	58.1	63.4
March	**54.2**	**45.7**	63.4	52.4	50.3	41.2	55.0	47.6	57.3	66.3
April	**54.6**	**44.4**	62.2	49.7	51.1	40.1	55.2	47.7	61.2	64.9
May	**54.8**	**45.3**	61.5	48.7	51.6	41.8	56.0	49.1	60.2	61.5
June	**54.2**	**44.1**	60.4	45.8	51.6	41.9	54.3	47.3	58.7	55.9
July	**52.2**	**41.4**	58.5	43.6	49.3	38.7	53.1	44.6	56.2	58.3
August	**51.7**	**40.7**	60.5	45.6	48.3	37.1	52.6	43.5	50.2	49.4
September	**50.8**	**39.7**	61.4	46.9	47.0	36.1	49.3	38.7	53.2	50.3
October	**49.7**	**37.6**	61.5	46.3	45.7	33.2	48.0	36.6	49.1	48.3
November	**48.1**	**33.9**	59.4	40.8	43.8	29.9	47.7	34.7	49.0	43.3
December	**44.8**	**30.7**	56.9	38.6	39.7	25.4	46.5	34.3	47.3	40.6
1932										
January	**42.2**	**26.3**	53.3	33.4	37.4	21.1	43.3	30.1	47.7	40.0
February	**41.7**	**25.6**	56.2	33.7	36.0	20.4	41.4	27.5	46.8	41.6
March	**40.1**	**24.1**	51.8	31.4	35.3	19.9	40.4	25.1	45.1	35.4
April	**39.6**	**23.0**	48.4	27.5	36.1	20.0	38.5	24.1	44.8	37.2
May	**38.5**	**22.1**	45.0	24.0	35.8	20.0	38.1	24.0	43.9	39.5
June	**37.8**	**20.9**	43.0	22.1	35.8	19.3	36.5	22.3	44.0	36.4
July	**36.4**	**19.1**	40.7	19.2	34.7	17.8	34.8	20.8	44.7	39.1
August	**36.4**	**19.3**	41.6	21.8	34.5	17.3	34.6	19.9	41.5	36.7
September	**37.7**	**20.8**	45.3	25.7	35.2	18.1	34.5	20.0	42.1	35.1
October	**39.0**	**22.2**	48.4	28.7	36.1	19.1	34.2	20.1	45.2	37.6
November	**38.1**	**20.8**	47.4	25.6	35.1	18.1	33.9	20.0	44.8	36.8
December	**36.6**	**18.8**	45.9	23.8	33.4	15.8	33.0	18.3	45.8	37.4
1933										
January	**33.9**	**16.3**	42.2	19.8	31.0	14.0	30.4	16.2	43.5	36.8
February	**33.4**	**16.2**	43.1	21.2	29.8	13.3	31.2	15.8	40.9	32.1
March	**31.9**	**14.4**	39.9	16.7	29.0	12.8	28.7	13.8	42.0	33.4
April	**32.8**	**15.6**	40.1	18.5	30.2	13.5	30.6	16.1	39.5	30.5
May	**35.3**	**17.9**	43.8	21.9	32.0	15.3	33.1	18.2	44.7	36.0
June	**39.9**	**21.6**	48.5	25.8	36.9	19.2	36.3	21.1	50.4	38.3
July	**44.0**	**24.4**	51.0	27.3	41.7	22.7	40.3	23.8	51.9	39.4
August	**47.6**	**28.5**	56.0	33.3	45.4	26.9	41.3	25.0	55.5	41.9
September	**51.1**	**32.7**	63.0	40.0	48.2	30.9	41.5	25.3	60.6	49.9
October	**51.8**	**33.2**	64.1	41.7	49.0	31.0	40.3	24.6	64.6	55.8
November	**49.1**	**29.8**	59.0	34.2	47.0	29.0	38.7	23.2	62.8	52.3
December	**46.9**	**27.5**	53.8	30.4	45.1	26.6	37.8	23.0	66.9	56.4

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING** INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Stone, clay, and glass products											
	Group index		Brick, tile, and terra cotta		Cement		Glass		Marble, granite, slate, and other products		Pottery	
	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals
1923 average	(1)	(1)	99.3	95.1	109.0	104.2	101.1	92.6	(1)	(1)	93.7	85.8
1924 average	(1)	(1)	97.4	98.5	108.9	107.9	91.4	88.2	(1)	(1)	100.6	95.1
1925 average	(1)	(1)	98.9	99.1	105.3	104.9	94.4	93.4	(1)	(1)	98.3	96.3
1926 average	**100.0**	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	(1)	(1)	94.3	94.1	95.8	96.5	94.2	93.4	(1)	(1)	94.5	94.2
1928 average	(1)	(1)	84.9	82.8	87.7	88.3	92.9	94.3	(1)	(1)	95.3	93.4
1929 average	(1)	(1)	80.5	76.9	81.1	81.0	94.6	97.3	(1)	(1)	94.2	91.0
1930 average	(1)	(1)	63.1	55.3	74.1	71.5	81.3	78.3	(1)	(1)	84.7	74.7
1931 average	**62.8**	**52.3**	46.8	32.6	59.2	50.4	70.4	62.6	83.3	75.4	76.0	58.8
1932 average	**44.8**	**28.6**	29.3	13.7	41.2	25.6	58.5	43.1	49.8	34.8	61.1	37.4
1933 average	**45.1**	**26.9**	26.7	11.8	37.8	20.5	69.4	49.7	38.9	22.7	64.6	38.2
1931												
January	**61.5**	**52.0**	43.9	32.0	56.1	44.4	67.3	59.3	88.0	84.0	78.5	60.1
February	**62.8**	**55.8**	44.5	34.0	56.9	50.3	70.1	67.3	89.2	83.0	79.5	65.4
March	**65.2**	**58.5**	47.7	36.8	60.0	53.2	72.2	69.1	92.3	86.6	79.1	67.4
April	**67.5**	**60.5**	51.1	38.5	63.9	57.6	72.9	68.1	93.7	91.0	80.6	70.6
May	**68.9**	**61.1**	52.7	39.4	66.1	61.1	74.0	69.0	93.9	89.4	82.1	69.0
June	**68.4**	**58.7**	52.9	37.9	64.2	60.4	76.1	69.5	91.8	85.7	77.9	58.5
July	**64.0**	**51.7**	50.9	34.6	64.5	56.3	69.1	61.3	82.6	72.3	71.7	48.9
August	**63.3**	**50.9**	48.8	32.5	61.3	52.8	70.9	61.9	80.6	69.9	73.9	53.7
September	**62.3**	**48.9**	46.9	30.8	58.2	48.2	72.3	61.4	79.1	67.7	73.8	51.7
October	**59.5**	**46.7**	43.2	27.6	56.9	45.3	69.3	58.0	75.1	65.6	73.5	55.2
November	**56.4**	**43.0**	41.5	25.7	52.7	40.8	65.3	53.7	69.1	57.5	72.4	54.2
December	**53.3**	**39.3**	37.3	21.8	49.1	34.9	65.4	52.6	64.0	52.2	69.0	50.7
1932												
January	**47.1**	**32.0**	31.0	15.9	44.2	29.2	60.1	45.7	52.3	39.2	65.5	44.4
February	**47.9**	**33.6**	29.5	14.8	43.3	29.3	63.4	51.9	53.6	39.3	69.1	48.2
March	**48.1**	**33.2**	29.5	14.2	43.1	28.4	64.9	50.8	52.4	40.3	69.2	48.4
April	**48.1**	**32.9**	30.9	14.9	43.4	27.9	63.2	50.0	53.4	41.4	67.7	45.1
May	**46.0**	**30.6**	31.6	15.7	41.4	28.0	58.9	46.9	49.0	34.6	63.8	38.6
June	**43.5**	**27.0**	29.8	13.8	41.5	26.6	57.8	43.9	42.1	27.2	58.1	31.6
July	**41.8**	**24.8**	29.4	13.1	40.6	24.1	54.5	37.6	47.5	32.3	48.3	24.3
August	**42.3**	**25.5**	29.9	13.7	38.0	23.4	52.7	36.5	52.2	35.6	52.0	26.7
September	**43.5**	**26.0**	29.6	13.7	41.9	24.5	54.3	36.4	52.9	35.6	54.6	29.8
October	**44.6**	**27.5**	28.8	13.0	42.9	25.2	57.0	39.4	51.8	35.3	60.2	37.5
November	**43.7**	**25.9**	27.4	11.5	41.0	23.2	57.9	40.2	46.6	28.9	62.7	37.8
December	**40.7**	**23.9**	23.8	9.9	32.9	17.2	57.2	38.4	43.2	28.1	62.3	36.9
1933												
January	**35.4**	**20.1**	19.2	7.7	30.0	15.0	53.1	36.6	33.6	20.9	54.8	28.1
February	**36.7**	**20.8**	19.4	7.7	29.7	14.9	55.4	37.9	36.6	21.3	57.3	31.0
March	**37.1**	**20.7**	19.3	7.2	30.0	15.3	56.6	37.4	37.4	22.5	57.0	30.4
April	**38.4**	**21.0**	21.2	8.0	35.5	17.1	59.5	40.6	31.8	16.7	56.7	29.9
May	**41.2**	**23.8**	24.1	9.7	37.2	19.7	64.2	46.7	32.8	18.2	58.8	31.3
June	**46.0**	**27.8**	27.7	12.3	42.7	23.4	70.6	52.9	38.4	22.7	61.8	34.9
July	**49.3**	**29.2**	32.9	15.2	46.1	25.7	71.5	50.6	42.3	25.7	63.9	35.6
August	**52.9**	**33.0**	35.2	17.0	48.8	29.5	77.3	56.1	43.6	26.3	69.9	45.7
September	**52.9**	**32.5**	34.4	16.2	44.0	23.9	79.8	58.4	44.6	26.2	72.0	46.6
October	**51.7**	**32.8**	31.5	14.7	38.0	22.9	80.6	59.6	45.4	27.3	74.7	50.2
November	**50.4**	**31.0**	28.9	13.4	37.8	21.2	81.7	59.2	41.0	22.5	74.2	48.1
December	**49.1**	**30.2**	26.8	12.4	33.6	17.6	82.4	60.5	39.6	22.1	74.2	46.8

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Leather and its manufactures					
	Group index		Boots and shoes		Leather	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	110.7	113.9	111.1	117.0	109.6	107.0
1924 average	100.3	100.6	101.6	102.8	96.9	95.7
1925 average	101.9	101.8	102.9	103.6	98.7	97.5
1926 average	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	97.9	97.4	97.7	97.6	98.4	97.2
1928 average	92.8	89.7	91.9	88.0	95.4	93.7
1929 average	92.8	89.9	92.9	89.0	92.2	93.2
1930 average	85.0	72.9	85.0	70.1	85.2	83.0
1931 average	79.2	62.7	79.9	60.6	76.6	70.0
1932 average	74.7	49.6	76.2	48.8	68.4	52.6
1933 average	78.7	53.9	78.3	51.4	80.5	62.9
1931						
January	76.7	58.6	76.5	55.4	77.6	69.9
February	79.4	66.5	79.9	64.9	77.6	72.0
March	82.3	70.9	83.3	70.1	78.4	73.8
April	81.5	68.2	82.5	66.8	77.6	73.3
May	79.9	66.5	80.6	64.4	77.3	73.8
June	78.8	64.5	79.2	62.1	77.3	73.1
July	83.6	70.2	84.7	69.0	79.2	74.2
August	85.7	72.9	87.1	72.1	80.1	75.7
September	83.3	65.4	84.7	63.9	77.5	70.6
October	78.3	54.6	79.2	51.5	74.6	65.6
November	68.9	45.6	68.2	41.4	71.6	60.1
December	72.4	48.6	73.0	46.0	69.9	57.9
1932						
January	74.9	51.5	76.0	50.4	70.3	55.4
February	79.1	59.3	80.9	59.4	71.7	58.8
March	80.2	60.2	82.6	60.9	70.7	57.7
April	77.8	53.8	79.7	53.5	70.3	54.8
May	71.9	44.1	73.0	42.6	67.3	49.5
June	69.7	43.4	71.3	42.5	63.4	46.6
July	70.8	44.7	72.7	44.3	63.1	45.9
August	75.2	49.8	77.9	50.3	64.4	48.2
September	77.0	52.7	79.5	53.0	67.0	51.5
October	78.1	53.1	80.1	52.5	69.9	55.4
November	71.9	42.4	72.0	39.0	71.7	54.1
December	69.3	40.7	69.0	37.2	70.7	53.1
1933						
January	72.5	42.3	73.1	40.1	70.1	50.1
February	76.5	48.4	77.7	47.0	71.6	53.1
March	75.8	45.5	77.3	44.4	69.7	49.5
April	74.1	44.3	76.2	44.2	65.7	44.7
May	75.6	49.1	76.3	47.2	73.0	55.7
June	78.9	55.5	78.5	52.7	80.3	65.4
July	84.5	62.1	84.3	59.7	85.5	70.3
August	87.8	67.0	87.0	65.0	91.2	73.9
September	85.7	66.4	84.3	64.4	91.6	73.6
October	84.1	62.0	82.5	58.5	90.5	74.1
November	74.8	51.7	71.8	46.5	86.8	69.8
December	74.6	52.7	70.8	46.6	89.9	74.2

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING** INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Paper and printing									
	Group index		Paper boxes		Paper and pulp		Printing, book and job		Printing, newspaper and periodicals	
	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals	Employment	Payroll totals
1923 average	**96.5**	**89.7**	98.9	91.3	104.6	97.6	96.1	87.8	89.5	84.5
1924 average	**96.7**	**91.7**	98.2	93.3	98.6	94.4	97.9	90.8	93.1	89.7
1925 average	**97.3**	**94.3**	98.8	95.6	98.7	96.8	97.5	93.1	95.4	93.0
1926 average	**100.0**	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	**100.1**	**101.2**	96.8	99.0	97.5	96.6	100.3	102.1	103.4	104.6
1928 average	**99.2**	**101.5**	94.0	99.4	94.4	94.9	99.2	101.6	105.2	107.4
1929 average	**101.3**	**106.0**	96.0	103.3	95.5	98.2	102.6	105.8	108.3	112.8
1930 average	**98.3**	**101.9**	89.7	92.9	91.3	89.8	99.5	102.6	108.5	112.3
1931 average	**90.5**	**89.0**	82.1	79.6	80.8	70.3	89.7	87.6	105.6	106.6
1932 average	**81.2**	**69.6**	71.2	60.4	74.9	52.8	76.1	64.6	98.6	89.5
1933 average	**82.6**	**64.5**	77.8	63.0	82.2	55.5	70.5	55.1	99.1	80.9
1931										
January	**93.6**	**93.9**	82.8	79.8	82.5	74.9	96.8	97.3	107.1	108.1
February	**92.6**	**93.3**	81.7	80.6	82.4	77.9	94.8	94.0	105.8	107.2
March	**92.4**	**94.5**	81.9	83.0	82.0	77.1	93.0	94.4	107.9	110.4
April	**92.0**	**93.4**	82.0	82.1	82.0	75.5	91.9	92.6	107.6	110.2
May	**92.0**	**92.7**	81.4	81.7	82.6	75.2	91.5	90.9	107.7	110.3
June	**90.2**	**89.6**	80.9	79.8	81.0	71.2	88.7	87.5	106.2	107.9
July	**89.5**	**86.8**	80.1	76.9	81.1	68.1	88.1	85.2	104.5	104.8
August	**89.2**	**86.3**	81.1	78.0	81.2	69.5	88.4	85.0	102.6	102.2
September	**88.4**	**83.9**	83.1	77.7	79.5	64.2	86.0	80.8	103.0	103.2
October	**89.0**	**84.9**	84.7	82.8	79.6	65.4	85.3	79.8	105.1	105.0
November	**88.6**	**84.2**	83.9	78.4	78.4	63.6	85.7	80.6	104.9	104.4
December	**88.4**	**84.4**	81.5	74.6	77.6	61.5	86.7	83.2	105.1	105.1
1932										
January	**86.5**	**79.4**	74.6	65.6	77.4	57.9	85.9	79.6	102.8	98.5
February	**85.0**	**77.5**	73.4	65.1	77.7	61.2	82.4	74.4	101.4	95.9
March	**84.2**	**76.5**	73.3	65.9	77.8	61.0	80.1	71.9	101.1	95.3
April	**83.1**	**74.1**	72.5	63.4	76.4	57.2	78.7	69.0	100.4	94.4
May	**81.6**	**71.6**	69.1	58.6	75.0	54.8	77.4	66.9	99.4	92.0
June	**79.9**	**67.7**	69.1	57.8	73.3	49.9	75.1	62.8	97.7	88.4
July	**78.4**	**64.2**	66.5	52.8	72.2	45.9	73.9	59.9	96.0	85.1
August	**77.3**	**62.7**	66.6	52.8	72.2	46.7	70.9	56.8	95.1	83.0
September	**78.8**	**65.1**	69.8	59.0	74.1	49.4	71.7	58.6	96.3	84.7
October	**80.2**	**66.7**	73.6	63.8	75.2	52.0	72.6	59.5	97.4	85.4
November	**80.1**	**65.3**	74.1	61.6	75.0	50.3	71.8	57.0	97.9	85.7
December	**79.5**	**64.9**	71.9	58.0	73.0	46.7	72.7	59.3	98.0	85.8
1933										
January	**78.2**	**62.3**	67.3	51.4	72.2	45.0	71.7	57.6	97.1	82.6
February	**78.1**	**61.2**	68.3	53.7	72.5	46.5	71.0	54.9	96.8	80.2
March	**76.8**	**58.8**	68.9	51.4	72.5	45.2	67.5	51.9	95.8	77.8
April	**76.5**	**58.1**	67.0	51.1	72.6	45.6	66.7	50.2	96.5	77.1
May	**77.4**	**60.3**	69.1	55.8	74.8	50.2	66.7	51.9	96.5	77.5
June	**78.9**	**61.9**	73.6	61.4	77.3	54.1	67.4	52.2	96.2	77.5
July	**80.5**	**63.0**	77.9	65.7	81.9	58.4	66.9	52.4	95.8	76.3
August	**84.8**	**65.8**	86.1	71.5	88.8	65.1	70.2	53.4	96.5	77.2
September	**88.7**	**69.3**	90.9	76.3	83.9	66.4	72.4	56.6	100.8	82.5
October	**90.5**	**70.6**	92.6	76.0	94.8	66.3	73.5	57.8	104.1	85.3
November	**90.2**	**70.3**	88.4	72.2	93.1	62.0	74.5	59.0	105.8	87.2
December	**90.5**	**71.8**	83.6	69.4	92.0	61.4	77.3	62.7	107.3	89.1

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Chemicals and allied products											
	Group index		Chemicals		Cottonseed—oil, cake, and meal		Druggists' preparations		Explosives		Fertilizers	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	96.2	91.8
1924 average	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	86.9	83.6
1925 average	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	95.1	90.6
1926 average	**100.0**	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	(1)	(1)	102.5	104.0	(1)	(1)	95.5	106.1	107.2	107.8	91.2	94.0
1928 average	(1)	(1)	103.5	104.7	(1)	(1)	88.1	98.8	115.5	108.9	95.4	97.1
1929 average	(1)	(1)	110.9	107.4	(1)	(1)	93.4	105.1	131.5	131.2	95.2	94.7
1930 average	(1)	(1)	104.4	95.0	(1)	(1)	86.1	98.2	112.9	99.8	89.5	87.5
1931 average	**86.0**	**82.5**	95.8	82.2	47.0	48.9	83.0	91.6	99.3	80.8	62.9	56.2
1932 average	**75.2**	**63.2**	85.5	63.9	41.8	39.8	73.0	72.8	76.0	50.9	49.5	34.9
1933 average	**85.5**	**67.2**	102.2	72.9	40.6	37.4	73.4	71.5	87.3	58.7	65.4	39.2
1931												
January	**92.5**	**87.9**	101.5	85.7	87.8	81.4	84.9	95.0	110.4	76.5	73.5	66.6
February	**90.8**	**88.9**	100.8	87.5	67.4	60.7	86.4	98.7	108.8	88.8	74.2	66.5
March	**89.5**	**87.2**	98.6	86.9	57.8	52.9	86.0	98.5	104.8	87.8	93.7	78.3
April	**92.8**	**89.5**	96.2	84.1	54.5	52.6	81.9	93.1	104.0	84.4	116.4	105.4
May	**88.1**	**87.5**	95.1	83.6	37.8	40.5	80.4	90.2	98.4	80.9	72.9	66.5
June	**84.0**	**83.3**	95.1	82.6	28.4	31.3	77.7	86.4	94.7	78.9	44.5	44.2
July	**83.0**	**81.0**	95.2	81.6	26.0	28.8	79.6	86.9	98.3	80.8	41.3	40.7
August	**81.5**	**79.3**	92.1	78.5	22.1	29.3	82.2	88.5	97.1	82.8	44.2	40.8
September	**82.9**	**78.7**	95.2	81.0	30.6	37.6	86.5	91.3	96.0	81.5	50.1	44.0
October	**83.1**	**79.0**	95.9	82.3	40.5	48.2	86.5	94.7	95.0	81.9	49.0	41.3
November	**82.2**	**74.4**	93.4	77.1	56.8	63.0	83.8	88.6	94.3	78.3	46.8	38.3
December	**81.0**	**73.4**	91.0	75.1	53.7	60.7	80.4	87.0	89.9	67.1	48.5	41.2
1932												
January	**80.2**	**70.1**	89.9	71.1	45.5	49.0	80.7	82.8	86.8	56.0	51.2	40.6
February	**80.3**	**70.6**	88.9	70.7	48.2	49.5	78.8	81.2	84.3	58.6	56.6	40.4
March	**79.9**	**69.7**	88.9	70.9	46.5	45.3	79.6	79.7	77.9	56.4	63.9	42.7
April	**80.6**	**68.2**	87.7	68.0	41.1	40.4	74.2	74.5	75.4	51.5	90.0	58.2
May	**76.1**	**65.5**	86.1	65.6	34.7	34.3	73.3	73.4	75.0	54.3	58.3	41.1
June	**69.3**	**60.4**	83.6	61.6	23.8	26.4	70.5	70.6	71.3	45.5	32.5	25.1
July	**68.0**	**56.5**	82.1	58.6	28.1	28.3	66.1	64.2	66.6	42.8	30.4	24.0
August	**67.6**	**56.1**	81.3	58.6	27.5	28.1	68.2	65.7	69.2	43.6	34.2	25.2
September	**73.4**	**59.5**	82.3	58.5	46.3	40.3	69.7	68.1	71.6	44.8	42.5	29.6
October	**75.5**	**60.9**	84.7	61.7	54.1	44.9	71.7	70.4	75.7	51.2	45.1	30.1
November	**76.0**	**60.8**	85.3	61.6	54.7	47.0	71.9	71.8	79.0	54.1	46.0	30.8
December	**75.6**	**59.7**	84.6	59.8	51.1	44.3	71.4	70.9	79.3	51.7	43.5	30.4
1933												
January	**75.2**	**59.5**	85.4	60.4	36.6	33.1	73.9	72.5	75.9	46.6	49.9	32.5
February	**76.5**	**59.7**	86.8	61.4	40.6	34.1	70.5	70.0	76.2	47.0	56.7	32.6
March	**76.4**	**58.5**	86.4	60.2	38.4	33.0	69.8	66.5	75.7	47.7	67.4	36.3
April	**79.1**	**58.6**	85.2	59.4	27.8	23.3	67.7	62.3	75.1	44.9	117.4	59.4
May	**77.3**	**61.1**	88.4	63.7	23.2	22.0	66.2	63.1	75.0	46.9	67.2	36.8
June	**78.8**	**64.4**	94.3	69.1	27.9	27.7	67.0	66.1	75.4	51.2	44.3	27.9
July	**83.1**	**67.2**	103.0	75.5	31.4	30.9	69.9	66.6	83.3	58.5	46.5	29.8
August	**89.5**	**71.0**	113.6	82.2	37.3	36.0	71.7	71.5	91.3	67.8	50.9	32.6
September	**95.9**	**74.2**	118.6	81.8	54.4	49.8	76.9	75.4	103.8	71.7	65.2	42.5
October	**98.7**	**77.8**	120.9	57.0	62.9	60.3	80.8	80.3	105.9	77.4	72.1	48.0
November	**98.1**	**76.9**	121.9	86.3	54.6	50.9	82.4	81.8	106.3	74.6	72.0	44.2
December	**97.3**	**77.2**	121.3	87.9	52.3	47.5	83.4	82.0	103.3	70.4	75.1	48.1

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN **MANUFACTURING** INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

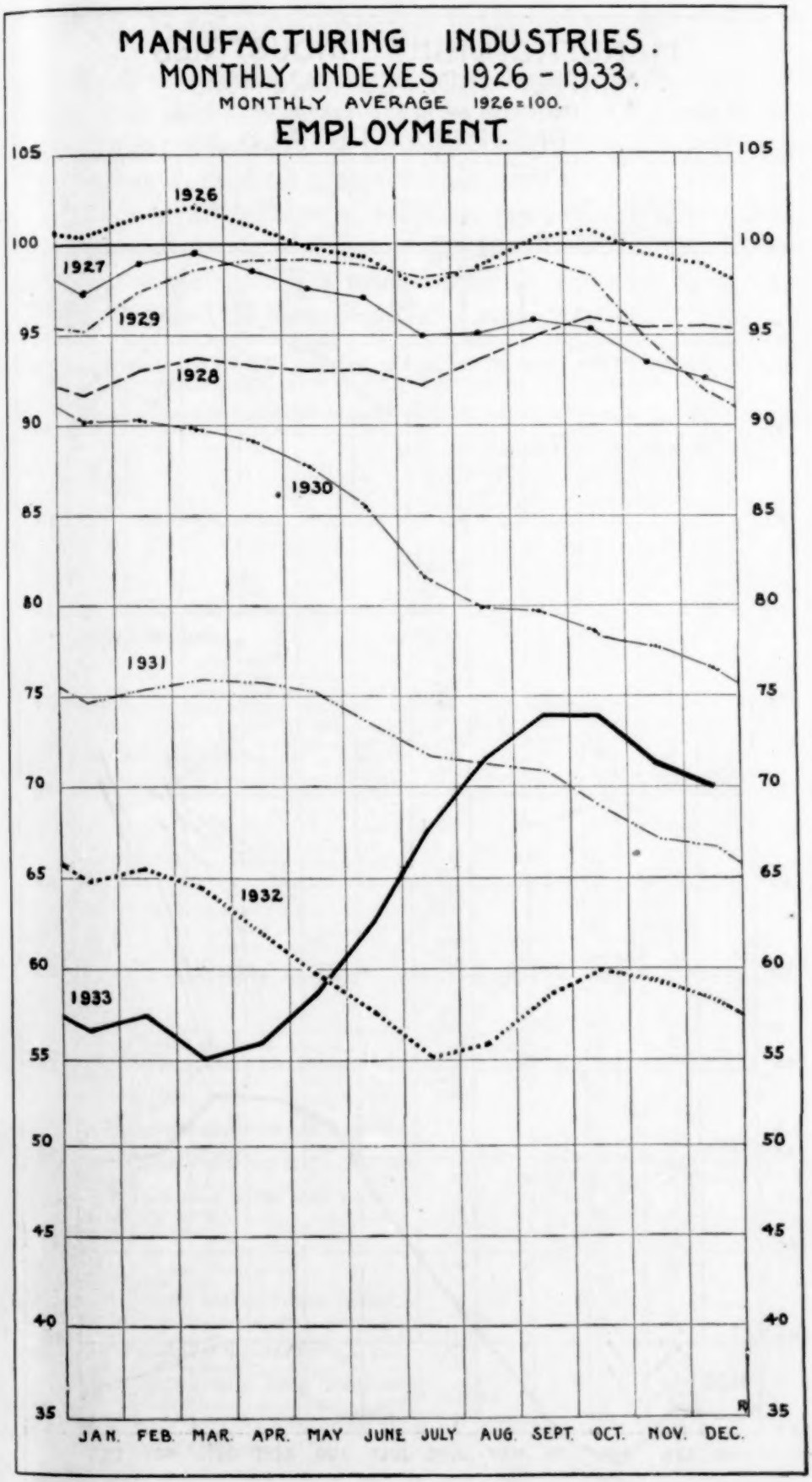
Month and year	Chemicals and allied products—Continued							
	Paints and varnishes		Petroleum refining		Rayon and allied products		Soap	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	(1)	(1)	99.7	102.1	(1)	(1)	(1)	(1)
1924 average	(1)	(1)	91.8	91.7	(1)	(1)	(1)	(1)
1925 average	(1)	(1)	94.0	95.2	(1)	(1)	(1)	(1)
1926 average	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927 average	(1)	(1)	94.6	95.6	(1)	(1)	(1)	(1)
1928 average	(1)	(1)	84.8	87.2	(1)	(1)	(1)	(1)
1929 average	(1)	(1)	96.5	99.1	171.3	173.2	(1)	(1)
1930 average	(1)	(1)	92.6	95.9	162.6	168.5	(1)	(1)
1931 average	80.6	77.8	73.5	73.4	149.5	148.4	100.3	103.1
1932 average	70.2	57.5	64.1	57.2	129.2	110.8	95.6	85.6
1933 average	73.2	55.5	66.7	55.6	167.9	141.2	103.0	83.8
1931								
January	81.0	77.9	81.0	81.8	137.3	141.2	98.9	109.7
February	81.9	81.9	79.7	83.1	138.0	141.6	99.4	107.9
March	82.9	84.0	71.5	74.8	144.8	150.4	99.3	107.3
April	84.2	84.7	77.9	79.7	148.0	149.8	101.6	109.1
May	86.3	87.8	78.1	79.2	151.4	158.6	103.4	112.2
June	85.6	85.3	75.4	75.1	154.5	157.7	100.1	105.5
July	80.9	78.2	73.7	73.8	156.5	157.0	100.5	96.9
August	78.5	74.3	71.6	70.5	158.6	158.4	99.2	103.0
September	78.3	72.5	69.9	68.4	153.5	148.8	102.8	100.9
October	77.6	71.4	68.8	66.6	153.5	152.6	101.6	101.7
November	75.3	68.0	67.4	64.2	149.5	132.6	99.0	92.0
December	74.6	67.3	67.3	64.1	147.9	132.6	97.7	90.5
1932								
January	73.4	63.2	67.2	62.5	149.9	128.5	95.9	87.9
February	73.9	64.3	66.4	61.9	149.2	136.5	96.5	89.7
March	74.2	65.0	65.2	60.1	143.7	133.1	96.8	89.4
April	72.8	62.8	65.1	58.7	138.8	125.6	96.5	90.5
May	73.1	64.4	64.8	59.8	129.9	110.6	94.2	85.4
June	72.3	61.8	64.7	59.4	93.4	78.3	95.7	90.5
July	68.9	53.0	64.1	56.8	92.9	71.2	93.1	82.6
August	66.0	48.7	62.8	56.2	92.8	74.5	93.9	81.5
September	66.9	51.6	63.4	54.6	130.9	110.8	94.5	83.3
October	68.2	54.6	61.8	52.2	139.6	118.3	96.9	84.4
November	67.1	51.7	61.5	52.0	142.8	120.2	98.3	83.0
December	65.7	49.3	62.5	51.8	146.9	122.5	94.5	79.2
1933								
January	63.6	45.9	62.1	53.3	149.3	123.5	94.2	77.0
February	64.2	47.3	62.7	53.0	149.1	121.0	95.1	78.0
March	63.3	43.5	62.8	53.2	142.0	114.5	93.7	76.3
April	65.3	48.7	62.9	52.6	133.1	103.1	94.0	76.8
May	71.6	57.9	63.6	53.7	147.0	117.8	95.8	78.8
June	76.4	62.3	64.7	54.6	154.9	130.1	99.5	83.2
July	78.7	61.5	64.7	54.5	167.6	140.1	101.5	84.9
August	80.0	60.2	66.0	55.0	188.3	156.3	110.9	86.0
September	80.4	59.2	70.0	57.6	196.7	168.3	116.0	91.9
October	80.4	61.0	72.7	59.8	197.3	172.4	116.7	92.6
November	77.8	58.9	73.4	60.1	197.7	172.9	112.1	91.6
December	77.0	59.4	74.2	59.8	191.8	174.5	106.9	88.2

[1] Data not available.

TABLE 4.—INDEXES OF EMPLOYMENT AND PAY ROLLS IN MANUFACTURING INDUSTRIES—YEARLY AVERAGES 1923 THROUGH 1933 AND BY MONTHS JANUARY 1931 THROUGH DECEMBER 1933—Continued

Month and year	Rubber products								Tobacco manufactures					
	Group index		Rubber boots and shoes		Rubber goods, other than boots, shoes, tires, and inner tubes		Rubber tires and inner tubes		Group index		Chewing and smoking tobacco and snuff		Cigars and cigarettes	
	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals	Employment	Pay-roll totals
1923 average	(1)	(1)	116.7	107.2	(1)	(1)	91.1	88.2	**116.9**	**114.0**	105.4	100.1	118.3	115.9
1924 average	(1)	(1)	82.7	76.6	(1)	(1)	88.6	88.1	**109.8**	**108.9**	105.2	101.2	110.4	109.9
1925 average	(1)	(1)	97.1	97.7	(1)	(1)	102.2	100.4	**107.5**	**105.7**	97.0	98.3	109.0	106.7
1926 average	**100.0**	**100.0**	100.0	100.0	100.0	100.0	100.0	100.0	**100.0**	**100.0**	100.0	100.0	100.0	100.0
1927 average	(1)	(1)	103.3	107.7	(1)	(1)	97.3	98.2	**98.1**	**97.1**	97.7	97.7	98.1	97.0
1928 average	(1)	(1)	101.1	101.0	(1)	(1)	103.3	105.7	**96.0**	**93.5**	95.2	94.1	96.0	93.4
1929 average	(1)	(1)	97.6	99.3	(1)	(1)	104.1	101.8	**93.6**	**92.8**	89.3	89.6	94.2	93.2
1930 average	(1)	(1)	80.2	74.2	(1)	(1)	77.6	73.4	**89.5**	**84.1**	89.5	87.7	89.5	83.7
1931 average	**73.0**	**59.6**	66.3	50.0	88.6	72.0	68.6	57.6	**81.3**	**69.3**	86.1	79.3	80.7	68.1
1932 average	**66.2**	**45.1**	56.3	39.7	81.5	56.1	62.9	42.5	**71.7**	**54.6**	88.9	73.7	69.5	52.2
1933 average	**74.6**	**50.4**	54.6	44.7	97.2	63.6	71.3	47.2	**66.9**	**48.9**	87.0	70.5	64.3	46.3
1931														
January	**74.0**	**61.8**	69.7	54.7	89.4	74.6	68.9	59.0	**77.7**	**68.2**	93.7	87.2	75.6	65.9
February	**73.2**	**61.8**	68.1	47.4	89.2	74.2	68.1	60.9	**85.6**	**69.3**	93.8	88.1	84.6	67.0
March	**71.3**	**61.9**	55.8	34.9	90.1	76.0	68.3	63.3	**85.0**	**72.4**	92.2	84.3	84.1	71.0
April	**72.7**	**64.1**	61.7	43.9	89.7	74.7	69.0	65.1	**82.1**	**69.5**	79.8	73.9	82.4	69.0
May	**75.2**	**67.2**	63.5	45.6	90.2	75.1	72.5	69.4	**82.7**	**72.3**	84.6	78.7	82.4	71.5
June	**76.1**	**68.1**	66.2	48.1	90.3	74.5	73.3	70.5	**81.7**	**72.6**	81.8	77.1	81.7	72.0
July	**74.7**	**61.6**	67.0	51.1	89.0	72.5	71.1	60.2	**81.3**	**71.4**	80.7	76.8	81.4	70.8
August	**72.5**	**59.7**	62.4	51.8	87.4	70.0	69.4	58.0	**81.0**	**70.2**	83.3	78.5	80.7	69.2
September	**72.7**	**53.7**	69.5	57.1	88.0	67.5	67.3	48.1	**81.4**	**66.4**	82.4	75.1	81.3	65.4
October	**71.5**	**53.8**	69.5	57.0	87.4	70.9	65.5	47.1	**81.8**	**68.5**	84.9	78.0	81.4	67.3
November	**71.6**	**50.4**	72.4	54.9	86.6	67.2	65.1	43.5	**81.4**	**68.4**	87.4	74.6	80.6	67.6
December	**70.8**	**51.6**	69.8	53.0	85.9	66.5	64.9	46.1	**73.7**	**62.5**	88.8	79.2	71.8	60.5
1932														
January	**69.6**	**51.4**	65.6	45.2	82.9	61.8	65.3	49.2	**71.2**	**56.5**	92.0	83.6	68.5	53.2
February	**69.6**	**52.2**	62.0	41.4	84.4	61.6	65.8	51.4	**74.0**	**56.9**	92.4	81.1	71.6	54.0
March	**68.5**	**49.8**	59.8	43.4	83.3	60.3	65.1	47.7	**72.5**	**55.5**	88.9	72.6	70.4	53.4
April	**67.5**	**46.7**	57.3	38.3	81.1	56.1	64.9	45.4	**70.5**	**52.4**	87.0	72.2	68.4	50.0
May	**66.7**	**46.4**	55.6	38.9	79.6	53.3	64.7	45.8	**69.3**	**51.5**	87.1	71.6	67.0	49.1
June	**67.6**	**51.1**	55.8	35.4	80.5	53.5	65.8	53.9	**71.1**	**55.5**	89.4	73.3	68.7	53.3
July	**65.5**	**43.8**	50.6	28.8	77.5	50.1	65.0	45.1	**70.3**	**54.6**	87.7	69.9	68.1	52.8
August	**64.1**	**40.1**	53.8	33.4	76.2	47.7	62.2	39.0	**70.3**	**52.5**	88.7	71.8	67.9	50.2
September	**62.3**	**37.6**	49.5	37.3	78.8	53.3	59.3	32.2	**72.0**	**54.2**	87.5	74.2	70.0	51.8
October	**63.9**	**41.1**	52.0	39.7	84.3	61.2	59.0	34.5	**73.9**	**55.8**	89.8	73.3	71.9	53.7
November	**64.6**	**40.2**	55.2	45.2	85.4	58.0	58.8	32.8	**74.8**	**55.7**	89.2	71.8	72.9	53.7
December	**64.5**	**40.6**	58.9	48.9	83.6	56.3	58.3	33.3	**70.8**	**53.5**	86.8	69.4	68.8	51.6
1933														
January	**62.2**	**36.6**	51.4	35.5	81.6	51.8	57.4	31.5	**62.4**	**40.9**	90.0	74.2	58.9	36.9
February	**62.6**	**36.8**	49.2	34.0	82.0	51.7	58.6	32.3	**65.6**	**42.8**	86.0	65.4	63.0	40.1
March	**60.2**	**32.2**	45.3	26.8	79.7	46.1	56.7	28.7	**59.7**	**38.5**	83.7	59.5	56.6	35.9
April	**60.1**	**34.8**	45.6	28.3	78.6	47.7	56.8	31.9	**58.3**	**38.4**	80.7	62.1	55.4	35.5
May	**63.0**	**44.4**	39.8	32.5	81.6	52.1	62.4	44.5	**66.3**	**48.6**	84.6	69.9	63.9	46.0
June	**70.4**	**54.4**	42.2	36.0	88.1	61.3	71.6	56.2	**68.4**	**50.4**	87.4	70.8	66.0	47.9
July	**78.7**	**61.6**	48.8	44.3	96.0	68.5	80.6	63.2	**67.5**	**50.3**	84.0	68.1	65.4	48.1
August	**87.5**	**62.5**	57.0	52.9	113.9	75.3	85.8	60.3	**69.6**	**51.3**	88.5	76.0	67.2	48.3
September	**89.4**	**61.6**	67.4	59.3	118.6	76.8	84.0	56.9	**69.1**	**55.6**	89.5	77.0	66.5	53.0
October	**89.1**	**62.8**	68.6	61.7	120.9	82.6	82.2	56.2	**72.3**	**59.0**	91.7	77.0	69.8	56.8
November	**87.1**	**58.0**	69.9	61.7	117.2	76.9	79.8	50.6	**73.9**	**57.8**	89.8	72.3	71.9	56.0
December	**84.6**	**59.2**	70.4	63.3	108.5	72.7	79.1	53.5	**69.5**	**53.6**	87.8	73.8	67.2	51.2

[1] Data not available.


MANUFACTURING INDUSTRIES.
MONTHLY INDEXES 1926 - 1933.
MONTHLY AVERAGE 1926=100.
EMPLOYMENT.
105
100
95
90
85
80
75
70
65
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50
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35
1926
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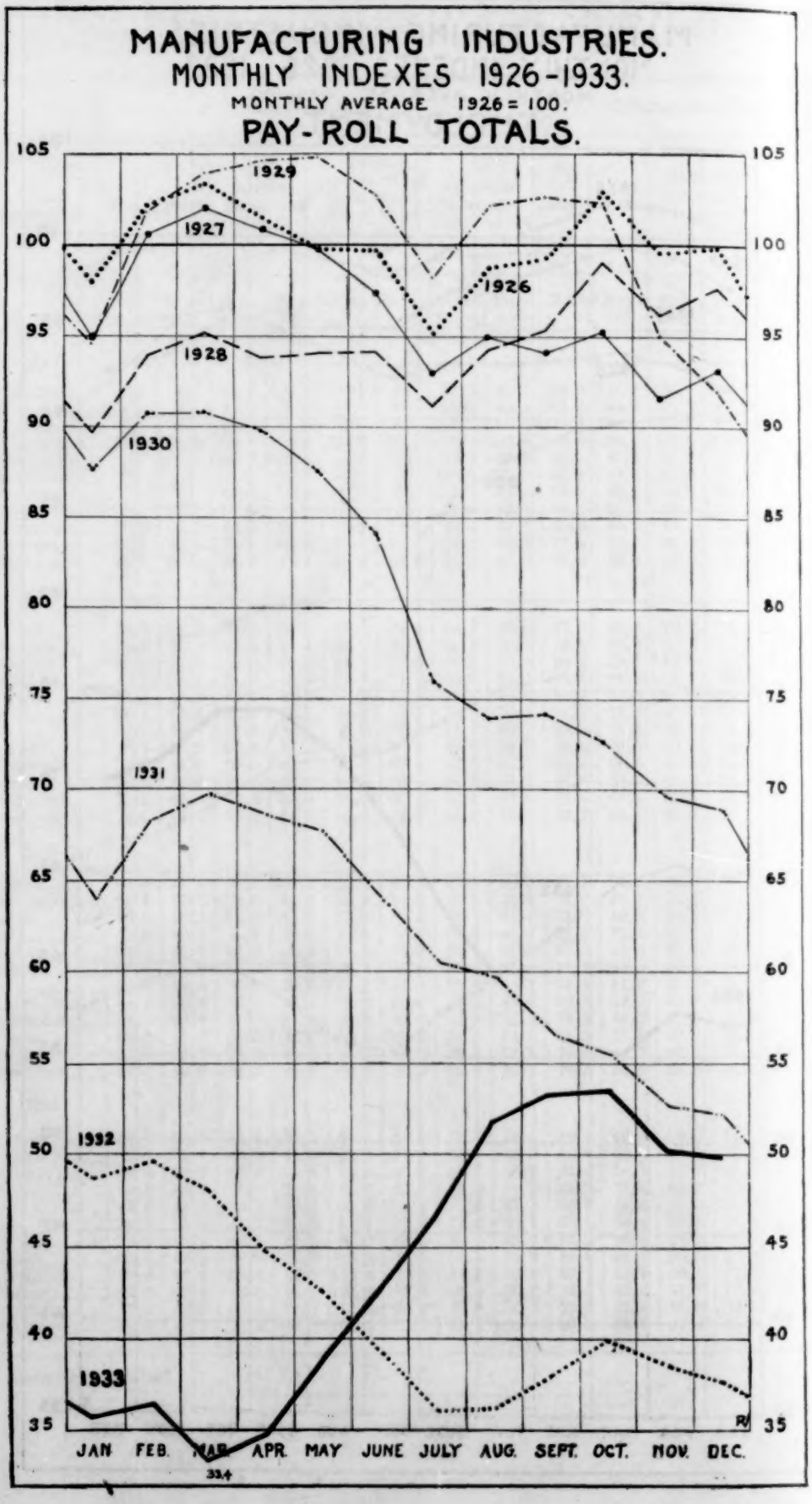
1932
1933
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.


MANUFACTURING INDUSTRIES.
MONTHLY INDEXES 1926-1933.
MONTHLY AVERAGE 1926 = 100.
PAY-ROLL TOTALS.
105
100
95
90
85
80
75
70
65
60
55
50
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1929
1927
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1932
1933
JAN
FEB.
MAR.
APR.
MAY
JUNE
JULY
AUG.
SEPT.
OCT.
NOV.
DEC.

Time Worked in Manufacturing Industries December 1933

REPORTS as to working time in December were received from 14,486 establishments in 89 manufacturing industries. Of these establishments 3 percent were idle, 67 percent operated on a full-time basis, and 31 percent worked on a part-time schedule.

An average of 92 percent of full-time operation in December was shown by reports received from all the operating establishments included in table 5. The establishments working part time in December averaged 75 percent of full-time operation.

TABLE 5.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN DECEMBER 1933

Industry	Establishments reporting		Percent of establishments operating—		Average percent of full time reported by—	
	Total number	Percent idle	Full time	Part time	All operating establishments	Establishments operating part time
Food and kindred products	**2,546**	(1)	**75**	**24**	**95**	**80**
Baking	906	(1)	84	15	98	86
Beverages	325	(1)	58	42	91	79
Butter	217	1	57	42	90	80
Confectionery	248		68	32	93	77
Flour	358	(1)	88	12	96	68
Ice cream	246	1	67	32	93	78
Slaughtering and meat packing	192		74	26	95	82
Sugar, beet	42		98	2	100	80
Sugar refining, cane	12		67	33	93	80
Textiles and their products	**2,619**	**5**	**70**	**24**	**92**	**67**
Fabrics:						
Carpets and rugs	20	10	75	15	93	57
Cotton goods	646	2	66	32	90	67
Cotton small wares	102	2	69	29	92	72
Dyeing and finishing textiles	139	2	71	27	93	73
Hats, fur-felt	19		26	74	77	69
Knit goods	402	2	78	20	94	70
Silk and rayon goods	216	6	87	8	97	68
Woolen and worsted goods	214	(1)	82	17	95	72
Wearing apparel:						
Clothing, men's	262	8	69	23	90	61
Clothing, women's	357	18	60	22	88	55
Corsets and allied garments	22		23	77	75	67
Men's furnishings	52	10	52	38	89	75
Millinery	84	5	73	23	94	76
Shirts and collars	84	5	79	17	94	67
Iron and steel and their products not including machinery	**1,114**	**4**	**46**	**50**	**86**	**73**
Bolts, nuts, washers, and rivets	65		37	63	83	72
Cast-iron pipe	40	25	30	45	77	61
Cutlery (not including silver and plated cutlery) and edge tools	111	4	38	59	83	77
Forgings, iron and steel	37		38	62	84	75
Hardware	61		44	56	84	72
Iron and steel	135	11	61	27	93	77
Plumbers' supplies	59		36	64	77	64
Steam and hot-water heating apparatus and steam fittings	80		35	65	79	68
Stoves	141		45	55	84	71
Structural and ornamental metal work	178	4	71	24	95	81
Tin cans and other tinware	55		44	56	88	77
Tools (not including edge tools, machine tools, files, and saws)	102	3	29	68	80	75
Wirework	50		44	56	84	72

[1] Less than one half of 1 percent.

TABLE 5.—PROPORTION OF FULL TIME WORKED IN MANUFACTURING INDUSTRIES BY ESTABLISHMENTS REPORTING IN DECEMBER 1933—Continued

Industry	Establishments reporting		Percent of establishments operating—		Average percent of full time reported by—	
	Total number	Percent idle	Full time	Part time	All operating establishments	Establishments operating part time
Machinery, not including transportation equipment	**1,469**	**1**	**62**	**37**	**91**	**74**
Agricultural implements	54	2	83	15	96	75
Cash registers, adding machines, and calculating machines	26	----	46	54	88	78
Electrical machinery, apparatus, and supplies	230	----	65	35	94	83
Engines, turbines, tractors, and water wheels	70	1	29	70	79	72
Foundry and machine-shop products	872	1	62	37	90	72
Machine tools	134	----	67	33	91	74
Radios and phonographs	41	----	88	12	98	86
Textile machinery and parts	35	----	57	43	91	79
Typewriters and supplies	7	----	71	29	96	86
Nonferrous metals and their products	**530**	**(1)**	**52**	**47**	**89**	**76**
Aluminum manufactures	14	----	43	57	91	77
Brass, bronze, and copper products	202	(1)	65	34	93	78
Clocks and watches and time-recording devices	19	----	5	95	81	79
Jewelry	96	1	29	70	84	77
Lighting equipment	43	----	40	60	84	74
Silverware and plated ware	47	----	32	68	83	73
Smelting and refining—copper, lead, and zinc	24	----	79	21	95	76
Stamped and enameled ware	85	----	69	31	92	72
Transportation equipment	**313**	**2**	**67**	**31**	**95**	**82**
Aircraft	25	----	68	32	94	82
Automobiles	164	1	71	29	96	84
Cars, electric- and steam-railroad	29	10	17	72	74	78
Locomotives	7	----	----	100	72	72
Shipbuilding	88	2	82	16	98	88
Railroad repair shops	**665**	**1**	**51**	**48**	**90**	**80**
Electric railroad	242	----	93	7	99	82
Steam railroad	423	1	27	72	86	80
Lumber and allied products	**1,284**	**2**	**66**	**32**	**92**	**75**
Furniture	370	2	73	25	93	72
Lumber:						
Millwork	405	2	62	36	91	76
Sawmills	493	1	65	34	92	76
Turpentine and rosin	16	6	31	63	87	80
Stone, clay, and glass products	**710**	**14**	**55**	**31**	**90**	**73**
Brick, tile, and terra cotta	229	25	51	24	91	72
Cement	65	15	68	17	93	64
Glass	148	1	83	16	97	83
Marble, granite, slate, and other products	178	16	19	65	78	72
Pottery	90	3	78	19	94	71
Leather and its manufactures	**380**	**7**	**74**	**19**	**93**	**66**
Boots and shoes	244	9	66	25	90	63
Leather	136	1	90	8	99	85
Paper and printing	**1,672**	**1**	**81**	**19**	**96**	**76**
Boxes, paper	278	(1)	75	24	94	77
Paper and pulp	369	3	62	36	90	74
Printing and publishing:						
Book and job	642	(1)	88	12	97	74
Newspapers and periodicals	383	----	91	9	99	87
Chemicals and allied products	**862**	**2**	**70**	**28**	**94**	**78**
Chemicals	78	1	95	4	100	91
Cottonseed—oil, cake, and meal	87	10	62	28	91	72
Druggists' preparations	29	----	52	48	91	81
Explosives	15	----	27	73	81	74
Fertilizers	157	----	96	4	99	73
Paints and varnishes	302	1	52	47	89	78
Petroleum refining	97	2	91	7	99	91
Rayon and allied products	15	----	100	----	100	----
Soap	82	----	56	44	91	80
Rubber products	**124**	----	**40**	**60**	**84**	**73**
Rubber boots and shoes	9	----	89	11	99	90
Rubber goods, other than boots, shoes, tires, and inner tubes	80	----	37	63	82	72
Rubber tires and inner tubes	25	----	31	69	82	75
Tobacco manufactures	**193**	**3**	**58**	**40**	**89**	**74**
Chewing and smoking tobacco and snuff	31	3	52	45	90	78
Cigars and cigarettes	167	2	59	39	89	73
Total, 89 industries	**14,486**	**3**	**67**	**31**	**92**	**75**

(1) Less than one half of 1 percent.

Employment in Nonmanufacturing Industries in December 1933

INCREASED employment in December, as compared with November, was reported in 6 of the 15 nonmanufacturing industries surveyed monthly by the Bureau of Labor Statistics and increased pay rolls were reported in 10 industries. Data for the building-construction industry are not presented here but are shown in more detail under the section "Building construction."

The most pronounced percentage gains in employment and pay rolls over the month interval were shown in the retail-trade industry. Reports received from 19,062 retail establishments indicated a net increase of 15.1 percent in employment and 10.6 percent in pay rolls in these establishments between November 15 and December 15. These pronounced percentage gains are due largely to seasonal fluctuations in the group of retail establishments composed of department, variety, general merchandise stores and mail-order houses, in which the Christmas trade resulted in an increase of 23.1 percent in employment and 17.6 percent in pay rolls. The remaining retail establishments surveyed showed a gain of 1.2 percent in employment over the month interval combined with an increase of 0.7 percent in pay rolls. The crude-petroleum-producing industry reported gains of 3.8 percent in employment and 5.7 percent in pay rolls, and the hotel industry reported increases of 2.4 percent in number of workers and 4.2 percent in pay rolls. The bituminous-coal mining and the telephone and telegraph industries reported increases in employment of 0.8 percent each combined with smaller gains in pay rolls, and the metalliferous-mining industry reported an increase of less than one tenth of 1 percent in employment combined with an increase of 2.6 percent in pay rolls. The most pronounced declines in employment and pay rolls in this group of nonmanufacturing industries were seasonal declines. The canning industry reported decreases of 28.7 percent in employment and 23.2 percent in pay rolls. The quarrying and nonmetallic-mining industry reported a seasonal decrease of 11.3 percent in employment and 13.7 percent in pay rolls. Employment in the anthracite-mining industry decreased 10.6 percent between November and December and the dyeing and cleaning industry reported a decline, largely seasonal, of 7.3 percent. The power and light industry reported a decrease of 1 percent in employment. In the remaining four industries in which decreases in employment occurred (electric-railroad and motor-bus operation, wholesale trade, banks-brokerage-insurance-real-estate, and laundries), the decreases were three tenths of 1 percent or less.

Eleven of the 15 nonmanufacturing industries appearing in the following table reported increased employment and pay rolls between December 1932 and December 1933, the canning, crude-petroleum,

and metalliferous-mining industries reporting the largest percentage gains in employment over the year interval. Four industries (electric-railroad and motor-bus operation and maintenance, laundries, anthracite mining, and telephone and telegraph) reported fewer employees and smaller pay-roll totals in December 1933 than in December 1932.

In the following table are presented employment and pay-roll data for the nonmanufacturing industries surveyed, exclusive of building construction:

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY ROLLS IN NONMANUFACTURING ESTABLISHMENTS IN DECEMBER 1933 WITH NOVEMBER 1933 AND DECEMBER 1932

Industrial group	Establishments reporting in both November and December 1933	Employment			Pay-roll totals			Index numbers, December 1933 (average 1929=100)	
		Number on pay roll December 1933	Percent of change		Amount of pay roll (1 week) December 1933	Percent of change			
			November to December 1933	December 1932 to December 1933		November to December 1933	December 1932 to December 1933	Employment	Pay-roll totals
Coal mining:									
Anthracite	161	75,765	−10.6	−12.5	$1,794,015	−7.2	−21.2	54.5	44.3
Bituminous	1,503	232,031	+.8	+7.7	4,020,905	+.2	+34.7	75.4	50.8
Metalliferous mining	288	27,555	(1)	+21.9	574,014	+2.6	+40.1	40.6	26.2
Quarrying and nonmetallic mining	1,162	30,658	−11.3	+7.1	434,751	−13.7	+10.4	45.3	24.4
Crude-petroleum producing	253	28,207	+3.8	+31.1	758,568	+5.7	+27.6	75.0	53.2
Public utilities:									
Telephone and telegraph	8,192	248,039	+.8	−7.2	6,554,172	+.1	−7.9	69.4	67.7
Power and light	3,135	204,734	−1.0	+4.3	5,907,376	−.1	+1.6	81.8	74.4
Electric-railroad and motor-bus operation and maintenance	498	131,741	−.2	−.8	3,542,879	+.3	−3.7	70.8	59.6
Trade:									
Wholesale	3,036	88,845	−.2	+8.2	2,315,049	+.6	+3.0	83.3	64.5
Retail	19,062	513,941	+15.1	+10.7	9,477,847	+10.6	+9.1	105.4	80.3
Hotels (cash payments only)[2]	2,356	129,718	+2.4	+6.0	1,697,276	+4.2	+1.8	77.6	57.6
Canning and preserving	803	39,319	−28.7	+46.6	496,713	−23.2	+52.3	49.4	39.9
Laundries	1,239	66,024	−.1	−.9	972,648	+.6	−.7	75.2	58.3
Dyeing and cleaning	342	10,134	−7.3	+1.5	170,186	−9.8	+3.3	76.3	50.0
Banks, brokerage, insurance, and real estate	4,395	175,190	[3]−.3	[3]+1.3	5,819,731	[3]+1.5	[3]+2.2	[3]99.3	[3]87.4

[1] Less than one tenth of 1 percent.
[2] The additional value of board, room, and tips cannot be computed.
[3] Weighted.

Per capita weekly earnings in December 1933 for 15 nonmanufacturing industries included in the Bureau's monthly trend-of-employment survey, together with the percents of change in December 1933 as compared with November 1933 and December 1932, are given in the table following. These per capita weekly earnings must not be confused with full-time weekly rates of wages; they are per capita weekly earnings computed by dividing the total amount of pay roll for the week by the total number of employees (part-time as well as full-time workers).

TABLE 2.—PER CAPITA WEEKLY EARNINGS IN 15 NONMANUFACTURING INDUSTRIES IN DECEMBER 1933 AND COMPARISON WITH NOVEMBER 1933 AND DECEMBER 1932

Industrial group	Per capita weekly earnings in December 1933	Percent of change	
		November 1933 to December 1933	December 1932 to December 1933
Coal mining:			
Anthracite	$23.68	+3.9	−9.9
Bituminous	17.33	−.6	+25.0
Metalliferous mining	20.83	+2.6	+14.8
Quarrying and nonmetallic mining	14.18	−2.7	+3.3
Crude-petroleum producing	26.89	+1.7	−2.7
Public utilities:			
Telephone and telegraph	26.42	−.7	−.7
Power and light	28.85	+.9	−2.6
Electric-railroad and motor-bus operation and maintenance	26.89	+.5	−2.9
Trade:			
Wholesale	26.06	+.9	−4.8
Retail	18.44	−3.9	−1.4
Hotels (cash payments only) [1]	13.08	+1.8	−4.0
Canning and preserving	12.63	+7.8	+3.8
Laundries	14.73	+.7	+.3
Dyeing and cleaning	16.79	−2.7	+1.7
Banks, brokerage, insurance, and real estate	33.22	[2] +1.9	[2] +.9

[1] The additional value of board, room, and tips cannot be computed.
[2] Weighted.

Indexes of Employment and Pay-Roll Totals for Nonmanufacturing Industries

INDEX numbers of employment and pay-roll totals for 15 nonmanufacturing industries are presented in the following table. These index numbers show the variation in employment and pay rolls by months, from January 1930 to December 1933, in all nonmanufacturing industries except the laundry, dyeing and cleaning, and the banks, brokerage, insurance, and real-estate industries for which information over the entire period is not available. The Bureau has secured data concerning employment and pay rolls for the index base year 1929 from establishments in these industries and has computed index numbers for those months for which data are available from the Bureau's files. These indexes are shown in this tabulation.

TABLE 3.—INDEXES OF EMPLOYMENT AND PAY ROLLS FOR NONMANUFACTURING INDUSTRIES, JANUARY TO DECEMBER 1930 1931, 1932, AND 1933

[12-month average, 1929=100]

Month	Anthracite mining								Bituminous-coal mining							
	Employment				Pay rolls				Employment				Pay rolls			
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
January	102.1	90.6	76.2	52.5	105.8	89.3	61.5	43.2	102.5	93.9	80.8	69.8	101.4	73.3	47.0	36.1
February	106.9	89.5	71.2	58.7	121.5	101.9	57.3	56.8	102.4	91.5	77.4	69.3	102.1	68.3	47.0	37.2
March	82.6	82.0	73.7	54.6	78.5	71.3	61.2	48.8	98.6	88.8	75.2	67.6	86.4	65.2	46.8	30.7
April	84.1	85.2	70.1	51.6	75.0	75.2	72.0	37.4	94.4	85.9	65.5	63.7	81.7	58.6	33.9	26.6
May	93.8	80.3	66.9	43.2	98.8	76.1	58.0	30.0	90.4	82.4	62.6	61.2	77.5	54.4	30.7	26.9
June	90.8	76.1	53.0	39.5	94.3	66.7	37.4	34.3	88.4	78.4	60.5	61.3	75.6	52.4	27.3	29.2
July	91.6	65.1	44.5	43.8	84.0	53.7	34.5	38.2	88.0	76.4	58.6	63.2	68.9	50.4	24.4	33.6
August	80.2	67.3	49.2	47.7	78.8	56.4	41.4	46.6	89.2	77.0	59.4	68.6	71.1	50.6	26.4	43.3
September	93.8	80.0	55.8	56.8	91.6	64.9	47.0	60.7	90.5	80.4	62.4	71.8	74.9	53.6	30.2	44.1
October	99.0	86.8	63.9	56.9	117.2	91.1	66.7	61.6	91.8	81.3	67.0	68.0	79.4	56.2	37.8	44.1
November	97.2	83.5	62.7	61.0	98.0	79.5	51.0	47.8	92.5	81.1	69.4	74.8	79.1	54.6	38.0	50.7
December	99.1	79.8	62.3	54.5	100.0	78.4	56.2	44.3	92.5	81.2	70.0	75.4	77.7	52.3	37.7	50.8
Average	93.4	80.5	62.5	51.7	95.3	75.4	53.7	45.8	93.4	83.2	67.4	67.9	81.3	57.5	35.6	37.8
	Metalliferous mining								Quarrying and nonmetallic mining							
January	95.7	68.3	49.3	32.4	92.7	55.0	29.7	18.1	79.6	64.4	48.9	35.1	71.9	50.4	30.2	18.1
February	92.3	65.3	46.9	31.5	92.5	54.6	27.8	17.8	79.8	66.6	47.4	34.8	73.5	54.4	29.6	17.4
March	90.9	63.5	45.0	30.0	90.8	52.8	26.5	17.4	83.0	70.0	46.0	35.1	80.0	58.2	28.7	17.8
April	89.3	63.9	43.3	29.4	88.3	51.4	25.0	16.4	87.4	76.1	48.6	39.3	85.4	62.6	30.0	20.2
May	87.5	62.4	38.3	30.0	85.6	49.3	23.8	17.0	90.8	75.0	50.6	43.4	90.2	62.3	32.3	23.8
June	84.6	60.0	32.2	31.5	81.6	46.1	20.1	18.3	90.3	72.3	49.5	47.3	90.9	60.1	30.0	27.5
July	80.5	56.2	29.5	33.0	71.9	41.3	16.9	19.0	89.9	71.0	49.5	49.5	85.5	57.3	29.1	28.4
August	79.0	55.8	28.6	36.8	71.0	40.2	16.5	21.9	89.3	68.9	51.1	51.6	85.8	55.1	29.7	29.9
September	78.1	55.5	29.3	38.9	69.9	40.0	17.0	23.9	87.7	66.6	52.4	52.6	82.5	51.2	30.5	29.3
October	77.2	53.8	30.5	40.7	68.6	37.4	18.0	25.9	84.7	64.5	52.4	53.2	79.3	48.7	30.1	31.2
November	72.8	52.8	31.9	40.6	63.4	35.1	18.7	25.6	78.3	59.3	49.4	51.1	66.8	43.3	27.1	28.3
December	70.1	51.2	33.3	40.6	59.9	34.3	18.7	26.2	70.2	53.9	42.3	45.3	59.9	36.9	22.1	24.4
Average	83.2	59.1	36.5	34.6	78.0	44.8	21.6	20.6	84.3	67.4	49.0	44.9	79.3	53.4	29.1	24.7
	Crude-petroleum producing								Telephone and telegraph							
January	92.7	74.8	54.9	57.2	94.0	71.5	46.5	39.9	101.6	90.5	83.0	74.6	105.1	96.3	89.1	71.7
February	90.8	73.2	54.4	57.0	88.6	70.0	46.9	41.7	100.2	89.2	82.0	73.9	101.9	94.8	89.6	71.9
March	89.3	72.2	51.4	56.5	91.3	73.2	43.2	42.5	99.4	88.6	81.7	73.2	105.8	97.9	88.2	71.6
April	86.8	69.8	54.9	56.8	86.6	66.3	44.5	40.1	98.9	88.1	81.2	72.3	103.4	95.0	83.4	67.8
May	89.8	67.8	54.5	56.9	85.4	64.7	47.1	41.6	99.7	87.4	80.6	70.1	103.2	94.1	82.8	68.5
June	90.2	65.0	54.2	58.0	87.1	62.7	44.8	40.6	99.8	86.9	79.9	69.2	103.4	95.0	82.1	66.6
July	89.9	65.3	55.4	59.5	88.5	59.2	44.6	42.2	100.0	86.6	79.1	68.5	106.6	93.3	79.6	66.7
August	87.7	62.4	57.4	60.8	86.0	56.3	42.9	42.5	98.8	85.9	78.1	68.1	102.5	92.3	79.1	66.1
September	85.0	61.2	56.2	66.2	84.0	55.2	41.9	44.4	96.8	85.0	77.4	68.3	102.2	92.1	75.9	64.6
October	85.2	60.4	56.8	70.6	82.6	54.4	42.5	50.1	94.5	84.1	76.2	68.7	100.9	91.6	75.7	67.0
November	83.6	57.6	56.5	72.2	80.0	52.0	42.4	50.3	93.0	83.5	75.5	68.9	97.9	89.7	74.3	67.7
December	77.4	58.2	57.2	75.0	77.2	54.9	41.7	53.2	91.6	83.1	74.8	69.4	101.3	92.7	73.5	67.7
Average	87.4	65.7	55.3	62.2	85.9	61.7	44.1	44.1	97.9	86.6	79.1	70.4	102.9	93.7	81.1	68.2
	Power and light								Electric-railroad and motor-bus operation and maintenance [1]							
January	99.6	99.2	89.3	77.7	99.7	98.6	88.4	73.0	97.1	86.9	79.5	70.6	97.8	85.6	75.4	60.9
February	98.8	97.8	87.2	77.4	100.4	99.7	86.0	71.6	95.1	86.6	78.9	70.4	95.7	87.1	74.8	60.6
March	99.7	96.7	85.5	76.9	102.1	102.4	85.4	71.9	94.4	86.4	77.6	69.8	95.4	88.1	73.6	59.4
April	100.7	97.1	84.8	76.9	102.6	97.6	82.4	69.4	95.2	86.8	78.0	69.5	97.1	86.6	71.8	58.1
May	103.4	97.6	84.0	76.9	104.5	98.7	84.2	69.9	95.2	85.9	76.9	69.1	96.0	85.1	72.2	58.2
June	104.6	97.2	83.2	77.3	107.8	98.3	80.5	69.9	94.8	85.3	76.5	69.3	97.0	84.8	70.2	58.0
July	105.9	96.7	82.3	77.5	106.7	97.4	78.7	70.0	95.3	85.6	75.6	69.4	95.6	83.3	66.4	57.4
August	106.4	95.9	81.5	78.1	106.6	96.2	76.7	70.9	92.9	84.8	74.1	69.5	92.1	81.9	63.8	58.2
September	105.2	94.7	81.0	80.3	106.1	94.3	74.7	71.8	91.8	84.0	73.5	69.7	90.5	81.2	62.5	57.8
October	104.8	92.7	79.9	82.2	105.6	93.2	74.4	76.2	91.0	82.7	72.3	70.6	88.9	79.0	61.5	59.8
November	103.4	91.3	79.1	82.6	103.7	93.3	73.2	74.5	89.3	81.5	71.8	71.0	87.7	79.7	61.7	59.4
December	103.2	90.3	78.4	81.8	106.3	91.2	73.2	74.4	88.8	79.9	71.4	70.8	88.6	77.8	61.9	59.6
Average	103.0	95.6	83.0	78.8	104.3	96.7	79.8	72.0	93.4	84.7	75.5	70.0	93.5	83.4	68.0	58.9

[1] Not including electric-railroad-car building and repairing; see transportation equipment and railroad repair-shop groups, manufacturing industries, table 1.

TABLE 3.—INDEXES OF EMPLOYMENT AND PAY ROLLS FOR **NONMANUFACTURING** INDUSTRIES, JANUARY TO DECEMBER 1930, 1931, 1932, AND 1933—Continued

	Wholesale trade								Retail trade							
	Employment				Pay rolls				Employment				Pay rolls			
	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933	1930	1931	1932	1933
January	100.0	89.5	81.8	75.3	100.0	87.5	74.1	61.7	98.9	90.0	84.3	76.9	99.7	89.4	78.0	62.7
February	98.5	88.2	80.9	74.1	98.3	88.4	72.5	58.6	94.4	87.1	80.5	73.4	96.0	86.7	73.7	58.4
March	97.7	87.4	79.8	73.1	99.7	89.1	71.3	57.1	93.9	87.8	81.4	71.4	95.5	87.5	73.4	55.1
April	97.3	87.4	78.9	73.3	97.9	85.2	68.9	56.0	97.3	90.1	81.6	78.6	97.5	88.3	72.7	60.4
May	96.8	87.1	77.9	74.0	97.4	84.7	69.7	57.4	96.7	89.9	80.9	77.0	97.3	88.0	71.1	59.5
June	96.5	87.1	77.0	75.7	98.6	84.1	66.2	57.3	93.9	89.1	79.4	78.3	96.8	87.6	68.2	60.5
July	96.0	86.8	76.6	76.9	96.0	83.3	64.7	59.1	89.0	83.9	74.6	74.6	91.7	83.3	63.3	58.1
August	95.0	86.5	76.4	79.7	93.6	82.1	63.2	60.8	85.6	81.8	72.6	78.1	87.6	80.3	60.7	62.7
September	94.8	86.1	77.1	82.1	93.6	81.4	63.1	62.3	92.0	86.6	77.8	86.0	92.4	83.5	64.6	69.2
October	94.2	85.2	77.8	83.5	92.9	79.9	63.9	66.0	95.5	89.8	81.3	89.6	95.1	84.6	67.1	72.3
November	92.6	84.1	77.6	83.4	91.0	79.7	63.3	64.1	98.4	90.9	81.7	91.6	96.8	85.4	66.9	72.6
December	92.0	83.7	77.0	83.3	91.3	77.8	62.6	64.5	115.1	106.2	95.2	105.4	107.7	94.1	73.6	80.3
Average	96.0	86.6	78.2	77.9	95.9	83.6	67.0	60.4	95.9	89.4	80.9	81.7	96.2	86.6	69.4	64.3

	Hotels								Canning and preserving							
January	100.4	95.0	83.2	73.8	100.3	91.0	73.9	55.7	46.1	48.9	35.0	34.1	50.3	46.1	31.8	24.8
February	102.4	96.8	84.3	73.8	103.8	93.7	73.9	55.9	45.7	48.3	37.1	35.1	51.5	48.6	32.7	25.9
March	102.4	96.8	84.0	72.4	104.4	93.4	72.4	53.5	49.7	53.0	36.3	33.2	50.8	50.3	31.9	24.2
April	100.1	95.9	82.7	71.9	100.3	89.9	69.6	51.7	74.8	59.6	47.0	49.2	72.6	57.1	37.9	33.5
May	98.0	92.5	80.1	71.9	98.4	87.7	67.0	51.8	65.7	56.0	40.5	45.5	66.9	56.0	36.0	31.8
June	98.0	91.6	78.0	73.6	98.1	85.4	63.8	52.3	83.0	70.6	55.5	55.6	81.5	58.6	40.5	36.7
July	101.3	93.3	78.4	75.6	99.8	85.2	61.8	53.3	126.3	102.2	73.0	76.6	112.7	74.2	47.5	46.2
August	101.5	92.8	77.6	77.1	98.6	83.8	59.3	54.0	185.7	142.9	99.0	112.7	172.0	104.7	65.6	68.3
September	100.1	90.6	77.0	78.7	97.1	81.9	59.1	55.6	246.6	180.1	125.3	175.6	214.8	129.4	75.1	127.0
October	97.5	87.4	75.4	77.0	95.5	79.7	58.6	56.2	164.7	108.1	81.1	126.3	140.0	77.6	51.8	87.1
November	95.2	84.9	74.3	75.8	93.6	77.1	57.5	55.2	96.7	60.8	50.5	69.3	82.9	48.1	34.4	50.8
December	93.5	83.1	73.2	77.6	91.5	75.4	56.6	57.6	61.6	40.7	33.7	49.4	57.4	36.9	25.6	39.0
Average	99.2	91.7	79.0	74.9	98.5	85.4	64.5	54.4	103.9	80.9	59.5	71.9	96.1	65.6	42.6	49.6

	Laundries						Dyeing and cleaning						Banks, brokerage, insurance, and real estate			
	Employment			Pay rolls			Employment			Pay rolls			Employment		Pay rolls	
	1931	1932	1933	1931	1932	1933	1931	1932	1933	1931	1932	1933	1932	1933	1932	1933
January	90.5	84.7	75.4	86.6	76.4	57.9	88.9	82.1	73.0	77.7	65.8	46.6	98.3	97.5	93.5	85.2
February	90.0	82.9	74.4	85.6	73.3	55.5	87.4	80.5	70.9	75.1	62.2	42.4	98.3	96.8	93.0	84.3
March	89.5	82.0	73.0	85.6	71.6	52.9	88.0	80.6	71.2	75.6	61.7	41.0	98.9	96.5	92.9	83.7
April	90.5	82.0	73.4	86.8	71.4	54.0	95.7	83.3	81.1	86.3	65.9	54.6	98.6	96.2	92.1	82.9
May	90.3	81.4	73.5	86.5	70.6	54.5	96.7	84.5	82.0	86.6	67.3	53.9	98.0	96.2	92.7	83.2
June	91.0	81.0	76.0	87.1	68.6	56.7	99.0	85.1	85.6	89.1	65.8	56.7	97.9	97.3	90.0	84.4
July	91.8	80.3	76.3	87.4	66.3	56.1	98.6	82.4	82.9	86.2	60.0	52.8	98.4	97.7	89.8	84.8
August	90.2	78.9	77.9	84.6	63.9	57.6	93.5	79.5	83.1	80.0	56.3	52.8	98.5	98.3	88.2	84.4
September	89.3	78.6	79.3	84.1	62.9	60.6	95.3	83.3	88.6	82.6	61.0	60.3	98.4	99.0	87.1	84.5
October	88.1	77.5	78.0	81.8	61.2	59.7	94.2	82.3	88.4	81.4	58.8	60.6	98.6	99.4	86.3	84.7
November	86.2	76.2	75.3	78.9	59.1	57.9	90.1	78.0	82.4	74.7	52.3	55.4	98.0	99.6	85.7	86.1
December	85.3	75.9	75.2	77.4	58.7	58.3	84.9	75.2	76.3	67.9	48.4	50.0	98.0	99.3	85.5	87.4
Average	89.4	80.1	75.6	84.4	67.0	56.8	92.7	81.4	80.5	80.3	60.5	52.3	98.3	97.8	89.7	84.6

A comparison of the yearly average indexes of employment for 1932 and 1933 indicates that employment in four of the 15 nonmanufacturing industries was higher in 1933 than in 1932. These four industries were canning and preserving, crude-petroleum producing, retail trade, and bituminous-coal mining. The increases in employment in the canning and preserving and the crude-petroleum-producing industries were pronounced, while the 1933 average indexes of employment in retail trade and bituminous-coal mining were only slightly above the 1932 level. Yearly indexes of pay rolls were higher in 1933 than in 1932 in only two industries, canning and preserving and bituminous-coal mining. The greatest decrease in employment in the comparison of these annual averages was shown in the anthracite-mining industry in which the 1933 average index was 17.3 percent below the average of the year 1932. Other large percentage declines in employment in this comparison were shown in the telephone and telegraph (11 percent), quarrying and nonmetallic mining (8.4 percent), and electric-railroad and motor-bus operation and maintenance (7.3 percent). Employment in 1933 in the metalliferous mining, power and light, hotel, and laundry industries ranged from 5.1 to 5.6 percent below the annual average of 1932. The decreases in employment in the remaining three industries in which the 12-month averages for 1933 were below the 1932 averages were small. The most pronounced decrease in pay rolls in this comparison was in the telephone and telegraph group (15.9 percent), although the decreases in the quarrying, hotel, and laundry industries were only slightly less.

Average Man-Hours Worked and Average Hourly Earnings

IN THE following tables the Bureau presents a tabulation of man-hours worked per week and average hourly earnings based on reports supplied by identical establishments in November and December 1933 in 15 industrial groups and 78 separate manufacturing industries. Man-hour data for the building-construction group and for the insurance, real estate, banking, and brokerage group are not available, and data for several of the 89 manufacturing industries surveyed monthly are omitted from these tables due to lack of adequate information.

The total number of establishments supplying man-hour data in these 15 industrial groups represents approximately 50 percent of the establishments supplying monthly employment data.

The tabulations are based on reports supplying actual man-hours worked and do not include nominal man-hour totals, obtained by multiplying the total number of employees in the establishment by the plant operating time.

Table 1 shows the average hours worked per employee per week and average hourly earnings in 15 industrial groups and for all groups combined. The average hours per week and average hourly earnings for the combined total of the 15 industrial groups are weighted averages, wherein the average man-hours and average hourly earnings in each industrial group are multiplied by the total number of employees in the group in the current month and the sum of these products divided by the total number of employees in the combined 15 industrial groups. The average man-hours and hourly earnings for the combined 89 manufacturing industries have been weighted in the same manner as the averages for all industrial groups combined, table 1.

In presenting information for the separate manufacturing industries shown in table 2, data are published for only those industries in which the available man-hour information covers 20 percent or more of the total number of employees in the industry at the present time.

TABLE 1.—AVERAGE HOURS WORKED PER WEEK PER EMPLOYEE AND AVERAGE HOURLY EARNINGS IN 15 INDUSTRIAL GROUPS, NOVEMBER AND DECEMBER 1933

Industrial group	Average hours per week		Average hourly earnings	
	November 1933	December 1933	November 1933	December 1933
			Cents	*Cents*
Manufacturing	34.4	34.2	52.3	52.6
Coal mining:				
Anthracite	28.1	29.8	80.8	80.1
Bituminous	29.7	29.9	57.8	58.9
Metalliferous mining	37.8	38.8	53.0	53.0
Quarrying and nonmetallic mining	32.5	31.3	45.7	46.1
Crude-petroleum producing	35.1	35.1	76.5	77.3
Public utilities:				
Telephone and telegraph	37.5	37.4	71.9	71.5
Power and light	42.4	43.0	67.1	66.9
Electric-railroad and motor-bus operation and maintenance	45.5	45.3	58.5	58.8
Trade:				
Wholesale	42.2	41.9	60.0	61.1
Retail	39.7	41.9	48.7	44.4
Hotels	50.5	49.8	24.3	24.9
Canning and preserving	32.0	32.7	37.3	39.3
Laundries	37.7	37.9	37.5	37.9
Dyeing and cleaning	40.5	39.2	43.1	43.6
Average	37.1	37.7	52.3	51.2

Per capita weekly earnings, computed by multiplying the average man-hours worked per week by the average hourly earnings, are not identical with the per capita weekly earnings appearing elsewhere in this trend-of-employment compilation, which are obtained by dividing the total weekly earnings in all establishments reporting by the total number of employees in those establishments. As already noted, the basic information upon which the average weekly man-hours and average hourly earnings are computed covers approximately 50 percent of the establishments reporting monthly employment data.

TABLE 2.—AVERAGE HOURS WORKED PER WEEK PER EMPLOYEE AND AVERAGE HOURLY EARNINGS IN SELECTED **MANUFACTURING** INDUSTRIES, NOVEMBER AND DECEMBER 1933

Industry	Average hours per week		Average hourly earnings	
	November 1933	December 1933	November 1933	December 1933
			Cents	*Cents*
Food and kindred products:				
Baking	40.9	40.8	50.5	50.7
Beverages	37.6	38.2	73.1	76.7
Confectionery	33.9	37.1	39.5	40.3
Flour	38.5	38.1	49.7	51.4
Ice cream	40.8	42.1	63.1	61.1
Slaughtering and meat packing	39.8	40.2	49.4	52.6
Sugar, beet	49.7	47.9	40.3	41.9
Sugar refining, cane	36.0	34.7	56.2	57.6
Textiles and their products:				
Carpets and rugs	32.7	32.0	51.1	51.1
Cotton goods	34.6	33.5	36.6	36.9
Cotton small wares	35.0	35.1	43.5	44.4
Dyeing and finishing textiles	35.8	35.5	51.9	51.6
Knit goods	36.0	33.9	45.8	45.7
Silk and rayon goods	33.7	31.7	42.3	42.9
Woolen and worsted goods	32.9	34.3	49.0	48.4
Iron and steel and their products, not including machinery:				
Bolts, nuts, washers, and rivets	34.6	33.8	50.5	50.3
Cast-iron pipe	27.5	33.2	51.0	47.4
Cutlery (not including silver and plated cutlery) and edge tools	37.1	37.4	51.0	52.4
Forgings, iron and steel	33.9	34.6	56.1	56.7
Hardware	32.1	34.3	50.8	53.3
Iron and steel	28.9	30.0	58.3	58.5
Plumbers' supplies	8.1	28.7	50.0	51.4
Steam and hot-water heating apparatus and steam fittings	31.9	32.9	55.5	55.7
Stoves	35.6	31.9	51.5	52.5
Structural and ornamental metal work	33.7	32.6	55.1	55.3
Tin cans and other tinware	35.6	37.2	52.0	52.0
Tools (not including edge tools, machine tools, files, and saws)	37.4	35.1	48.8	51.2
Wirework	32.3	35.2	53.6	53.2
Machinery, not including transportation equipment:				
Agricultural implements	35.5	35.8	51.8	52.5
Cash registers, adding machines, and calculating machines	38.8	39.7	64.8	64.6
Electrical machinery, apparatus, and supplies	32.8	31.8	56.6	57.5
Engines, turbines, tractors, and water wheels	35.4	37.1	60.6	60.9
Foundry and machine-shop products	33.2	33.1	56.2	56.8
Machine tools	36.4	37.1	57.9	57.7
Radios and phonographs	34.6	31.6	50.0	51.2
Textile machinery and parts	38.1	36.9	59.6	60.0
Typewriters and supplies	38.8	40.7	49.5	50.2
Nonferrous metals and their products:				
Aluminum manufactures	35.3	34.4	47.3	47.7
Brass, bronze, and copper products	34.7	35.3	52.5	53.3
Clocks and watches and time-recording devices	41.2	38.1	44.6	45.7
Jewelry	38.5	36.8	48.7	51.1
Lighting equipment	37.3	38.1	49.1	50.2
Silverware and plated ware	39.2	39.7	50.6	49.8
Smelting and refining—copper, lead, and zinc	36.0	33.9	50.6	51.5
Stamped and enameled ware	35.7	33.9	46.2	47.7
Transportation equipment:				
Aircraft	37.5	38.4	65.3	63.4
Automobiles	30.6	30.4	65.6	64.2
Cars, electric and steam railroad	34.2	33.2	57.9	58.2
Locomotives	32.8	32.1	60.7	59.8
Shipbuilding	29.5	31.2	67.6	65.1
Railroad repair shops:				
Electric railroad	43.7	44.1	57.8	58.0
Steam railroad	37.6	37.6	62.4	61.7
Lumber and allied products:				
Furniture	35.1	33.0	42.7	43.7
Lumber:				
Millwork	34.1	34.5	43.2	43.3
Sawmills	34.5	33.1	42.5	42.4
Stone, clay, and glass products:				
Brick, tile, and terra cotta	30.4	30.1	39.7	40.9
Cement	32.0	28.5	52.8	54.2
Glass	33.1	34.0	52.1	52.6
Marble, granite, slate, and other products	31.7	31.6	59.2	61.0
Pottery	39.0	37.3	44.1	45.0
Leather and its manufactures:				
Leather	37.8	38.2	50.5	51.5

TABLE 2.—AVERAGE HOURS WORKED PER WEEK PER EMPLOYEE AND AVERAGE HOURLY EARNINGS IN SELECTED **MANUFACTURING** INDUSTRIES, NOVEMBER AND DECEMBER 1933—Continued

Industry	Average hours per week		Average hourly earnings	
	November 1933	December 1933	November 1933	December 1933
			Cents	*Cents*
Paper and printing:				
Boxes, paper	36.6	36.4	46.9	48.2
Paper and pulp	36.6	35.3	48.1	49.7
Printing and publishing:				
Book and job	35.8	36.6	70.3	70.8
Newspapers and periodicals	36.5	36.9	83.0	83.0
Chemicals and allied products:				
Chemicals	39.1	39.7	59.1	60.0
Cottonseed—oil, cake, and meal	42.0	40.4	25.1	26.1
Druggists' preparations	39.1	38.1	47.4	46.9
Explosives	33.4	33.7	62.2	60.6
Fertilizers	32.3	33.1	37.3	37.1
Paints and varnishes	37.9	38.2	53.7	53.9
Petroleum refining	35.3	35.8	69.0	68.7
Rayon and allied products	37.6	37.9	46.8	48.2
Soap	38.5	37.9	50.9	52.2
Rubber products:				
Rubber goods, other than boots, shoes, tires, and inner tubes	33.9	34.8	49.5	48.8
Rubber tires and inner tubes	28.5	29.5	70.7	72.4
Tobacco manufactures:				
Chewing and smoking tobacco and snuff	34.5	34.9	37.6	38.3
Cigars and cigarettes	37.0	36.9	35.7	36.1

Employment in Building Construction in December 1933

EMPLOYMENT in the building-construction industry decreased 17.7 percent in December as compared with November and pay rolls decreased 19.7 percent over the month interval.

The percent of change in employment and pay-roll totals in December as compared with November are based on returns made by 10,840 firms engaged on public and private projects not aided by public-works funds. These firms employed in December 67,768 workers in the various trades in the building-construction industry whose combined weekly earnings during the pay period ending nearest December 15 were $1,448,123. These reports cover building operation in various localities in 34 States and the District of Columbia.

COMPARISON OF EMPLOYMENT AND TOTAL PAY ROLL IN THE **BUILDING CONSTRUCTION** INDUSTRY IN IDENTICAL FIRMS, NOVEMBER AND DECEMBER 1933

Locality	Number of firms reporting	Number on pay roll		Percent of change	Amount of pay roll		Percent of change
		Nov. 15	Dec. 15		Nov. 15	Dec. 15	
Alabama: Birmingham	72	387	246	−36.4	$5,296	$3,129	−40.9
California:							
Los Angeles [1]	23	946	1,186	+25.4	17,550	24,243	+38.1
San Francisco-Oakland [1]	32	890	745	−16.3	21,023	15,669	−25.5
Other reporting localities [1]	16	363	333	−8.3	7,910	7,232	−8.6
Colorado: Denver	202	772	598	−22.5	14,079	12,379	−12.1
Connecticut:							
Bridgeport	124	580	371	−36.0	11,920	7,417	−37.8
Hartford	257	1,199	827	−31.0	25,826	16,522	−36.0
New Haven	178	963	801	−16.8	22,526	16,272	−27.8
Delaware: Wilmington	111	853	592	−30.6	17,374	10,505	−39.5
District of Columbia	498	7,357	6,105	−17.0	205,800	157,287	−23.6
Florida:							
Jacksonville	59	406	377	−7.1	6,465	6,936	+7.3
Miami	83	1,007	846	−16.0	19,519	16,634	−14.8

[1] Data supplied by cooperating State Bureaus.

COMPARISON OF EMPLOYMENT AND TOTAL PAY ROLL IN THE **BUILDING CONSTRUCTION** INDUSTRY IN IDENTICAL FIRMS, NOVEMBER AND DECEMBER 1933—Continued

Locality	Number of firms reporting	Number on pay roll		Percent of change	Amount of pay roll		Percent of change
		Nov. 15	Dec. 15		Nov. 15	Dec. 15	
Georgia: Atlanta	137	947	821	−13.3	$13,897	$13,356	−3.9
Illinois:							
Chicago [1]	116	1,661	1,233	−25.8	49,793	29,903	−39.9
Other reporting localities [1]	67	1,925	1,385	−28.1	64,089	43,657	−31.9
Indiana:							
Evansville	54	318	142	−55.3	5,177	2,412	−53.4
Fort Wayne	87	332	323	−2.7	5,572	6,198	+11.2
Indianapolis	158	899	865	−3.8	18,031	16,245	−9.9
South Bend	41	260	255	−1.9	4,125	4,896	+18.7
Iowa: Des Moines	94	384	262	−31.8	6,880	5,212	−24.2
Kansas: Wichita	67	219	168	−23.3	3,650	2,685	−26.4
Kentucky: Louisville	146	1,139	854	−25.0	20,192	15,351	−24.0
Louisiana: New Orleans	121	912	683	−25.1	15,844	11,362	−28.3
Maine: Portland	99	348	303	−12.9	6,997	6,028	−13.8
Maryland: Baltimore [1]	106	822	631	−23.2	14,297	10,683	−25.3
Massachusetts: All reporting localities [1]	703	4,617	4,011	−13.1	105,289	91,794	−12.8
Michigan:							
Detroit	484	3,580	3,126	−12.7	70,009	63,678	−9.0
Flint	58	254	183	−28.0	4,412	2,860	−35.2
Grand Rapids	106	429	292	−31.9	6,847	4,278	−37.5
Minnesota:							
Duluth	54	299	210	−29.8	4,677	4,415	−5.6
Minneapolis	223	1,490	1,081	−27.4	28,350	20,224	−28.7
St. Paul	169	890	741	−16.7	18,608	15,618	−16.1
Missouri:							
Kansas City [2]	293	1,708	1,367	−20.0	37,083	29,584	−20.2
St. Louis	598	3,386	2,785	−17.7	85,007	74,020	−12.9
Nebraska: Omaha	152	703	657	−6.5	14,115	14,378	+1.9
New York:							
New York City [1]	334	5,807	4,655	−19.8	181,825	137,172	−24.6
Other reporting localities [1]	253	5,906	5,327	−9.8	130,501	118,618	−9.1
North Carolina: Charlotte	57	332	254	−23.5	5,311	3,985	−25.0
Ohio:							
Akron	79	298	236	−20.8	5,278	4,073	−22.8
Cincinnati [3]	470	1,907	1,504	−21.1	42,382	32,960	−22.2
Cleveland	610	2,276	2,003	−12.0	53,196	47,467	−10.8
Dayton	120	403	394	−2.2	7,273	6,708	−7.8
Youngstown	75	294	206	−29.9	5,104	3,198	−37.3
Oklahoma:							
Oklahoma City	94	567	434	−23.5	9,595	7,867	−18.0
Tulsa	57	238	184	−22.7	3,776	3,139	−16.9
Oregon: Portland	184	994	716	−28.0	19,452	15,179	−22.0
Pennsylvania: [4]							
Erie area [1]	25	494	515	+4.3	3,310	3,340	+.9
Philadelphia area [1]	419	5,118	4,165	−18.6	95,930	76,026	−20.7
Pittsburgh area [1]	209	1,388	1,329	−4.3	31,746	28,482	−10.3
Reading-Lebanon area [1]	48	275	288	+4.7	4,235	4,969	+17.3
Scranton area [1]	21	108	98	−9.3	2,271	1,957	−13.8
Other reporting areas [1]	285	2,425	2,155	−11.1	45,580	37,013	−18.8
Rhode Island: Providence	253	1,550	1,258	−18.8	33,847	25,205	−25.5
Tennessee:							
Chattanooga	38	191	126	−34.0	2,734	1,751	−36.0
Knoxville	49	362	293	−19.1	5,204	4,068	−21.8
Memphis	81	455	398	−12.5	7,674	4,945	−35.6
Nashville	85	563	528	−6.2	8,010	8,085	+.9
Texas:							
Dallas	183	717	567	−20.9	10,543	7,668	−27.3
El Paso	29	173	106	−38.7	2,172	1,568	−27.8
Houston	174	1,367	973	−28.8	25,249	16,531	−34.5
San Antonio	116	388	370	−4.6	4,976	5,158	+3.7
Utah: Salt Lake City	86	278	223	−19.8	5,134	3,649	−28.9
Virginia:							
Norfolk-Portsmouth	87	720	475	−34.0	13,013	7,451	−42.7
Richmond	136	921	651	−29.3	17,075	11,745	−31.2
Washington:							
Seattle	157	667	557	−16.5	12,378	10,393	−16.0
Spokane	54	306	231	−24.5	6,022	4,808	−20.2
Tacoma	81	163	250	+53.4	2,601	3,807	+46.4
West Virginia: Wheeling	46	208	90	−56.7	3,944	1,533	−61.1
Wisconsin: All reporting localities [1]	57	1,219	804	−34.0	17,289	14,543	−15.9
Total, all localities	10,840	82,323	67,768	−17.7	1,802,859	1,448,123	−19.7

[1] Data supplied by cooperating State Bureaus.
[2] Includes both Kansas City, Mo., and Kansas City, Kans.
[3] Includes Covington and Newport, Ky.
[4] Each separate area includes from 2 to 8 counties.

Trend of Employment in December 1933, by States

IN THE following table are shown the fluctuations in employment and pay-roll totals in December 1933 as compared with November 1933, in certain industrial groups by States. These tabulations have been prepared from data secured directly from reporting establishments and from information supplied by cooperating State agencies. The combined total of all groups does not include building-construction data, information concerning which is published elsewhere in a separate tabulation by city and State totals. In addition to the combined total of all groups, the trend of employment and pay rolls in the manufacturing, public utility, hotel, wholesale trade, retail trade, bituminous-coal mining, crude-petroleum producing, quarrying and nonmetallic mining, metalliferous mining, laundry, and dyeing and cleaning groups is presented. In this State compilation, the totals of the telephone and telegraph, power and light, and electric-railroad operation groups have been combined and are presented as one group—public utilities. Due to the extreme seasonal fluctuations in the canning and preserving industry, and the fact that during certain months the activity in this industry in a number of States is negligible, data for this industry are not presented separately. The number of employees and the amount of weekly pay roll in November and December 1933 as reported by identical establishments in this industry are included, however, in the combined total of "all groups."

The percents of change shown in the accompanying table, unless otherwise noted, are unweighted percentages of change; that is, the industries included in the groups, and the groups comprising the total of all groups, have not been weighted according to their relative importance in the combined totals.

The State totals for the anthracite-mining industry, which is confined entirely to the State of Pennsylvania, will be found in table 1, nonmanufacturing industries.

When the identity of any reporting company would be disclosed by the publication of a State total for any industrial group, figures for the group do not appear in the separate industrial-group tabulation, but are included in the State totals for "all groups." Data are not presented for any industrial group when the representation in the State covers less than three establishments.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS IN NOVEMBER AND DECEMBER 1933, BY STATES

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Total, all groups					Manufacturing				
	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change
Alabama	523	67,126	+3.0	$894,717	+7.0	210	47,943	+3.7	$618,553	+7.8
Arizona	401	9,479	+5.4	186,110	+4.0	44	2,074	+.9	38,448	+2.8
Arkansas	[1] *424*	*18,206*	*−.5*	*243,217*	*−3.9*	*176*	*12,681*	*−.3*	*157,341*	*−.4*
California	[2] *1,889*	*255,267*	*−.4*	*6,029,804*	*−.2*	*1,091*	*136,831*	*−4.6*	*3,065,151*	*−2.8*
Colorado	822	36,539	−.9	737,810	−.4	119	15,065	−3.1	292,487	−2.1
Connecticut	1,112	158,629	−2.6	3,009,486	−1.2	639	136,959	−3.4	2,455,788	−1.9
Delaware	157	10,579	−1.7	220,625	+.4	49	7,333	−2.7	143,563	+.4
Dist. of Columbia	619	33,968	+6.0	735,983	+3.9	46	1,983	−1.5	61,751	+2.1
Florida	636	29,232	+5.3	470,903	+4.3	127	13,975	−8.6	197,184	−8.8
Georgia	1,007	89,107	−2.2	1,183,439	−3.5	307	70,806	−2.5	826,851	−5.1
Idaho	232	10,122	−1.9	188,106	−4.0	35	5,359	−2.3	93,505	−8.6
Illinois	[3] *1,716*	*331,334*	*−1.0*	*6,855,415*	*−.4*	*1,100*	*208,270*	*−1.2*	*3,942,821*	*+.6*
Indiana	1,321	130,369	−2.9	2,358,426	−3.4	559	95,408	−2.7	1,683,782	−4.5
Iowa	1,164	47,338	+1.9	882,780	+2.6	395	24,668	−.3	453,822	+1.7
Kansas	[4] *1,338*	*70,188*	*−1.3*	*1,559,750*	*−1.9*	*452*	*27,543*	*−2.9*	*582,687*	*−1.0*
Kentucky	866	69,946	−1.9	1,098,207	−4.4	194	24,466	−1.8	399,366	+8.8
Louisiana	458	35,206	−1.5	558,478	−2.6	197	21,913	−2.4	296,419	−7.3
Maine	546	45,617	−.6	764,741	+2.4	175	38,855	+2.4	625,692	+3.7
Maryland	*829*	*89,063*	*−.8*	*1,755,740*	*+.8*	*458*	*61,347*	[5] *−4.8*	*1,161,438*	[5] *−2.5*
Massachusetts	[4] *8,027*	*378,178*	*−2.0*	*7,712,818*	*−1.9*	*1,137*	*188,018*	*−5.2*	*3,437,588*	*−5.2*
Michigan	1,669	303,580	+9.6	6,216,914	+9.2	*686*	*257,361*	*+9.7*	*5,110,448*	*+10.2*
Minnesota	1,144	71,130	−2.3	1,464,292	+.2	290	31,241	−5.3	625,564	−.6
Mississippi	369	9,890	−1.8	126,902	−7.5	71	6,194	−5.7	70,237	−14.3
Missouri	1,216	111,967	+.2	2,229,309	+2.4	509	57,679	−2.5	1,055,536	+1.3
Montana	343	11,436	−.8	270,621	−[6]	54	3,907	−.8	79,268	+.7
Nebraska	730	24,636	−1.7	505,089	−2.2	116	12,165	−5.9	248,960	−4.2
Nevada	133	1,517	−6.8	37,567	−3.2	20	248	−7.1	6,047	−.8
New Hampshire	486	35,059	−2.7	568,159	−3.5	182	30,436	−3.5	469,733	−4.4
New Jersey	1,539	214,963	+1.1	4,730,542	+.2	[7] *691*	*194,283*	*−1.0*	*4,079,719*	*−1.3*
New Mexico	189	4,940	+8.5	93,147	+13.7	24	657	−7.9	10,585	−14.6
New York	8,203	590,871	+2.3	13,841,863	+1.7	[8] *1,806*	*347,890*	*−1.8*	*7,804,088*	*−1.0*
North Carolina	920	137,566	−3.2	1,725,369	−3.9	562	131,815	−3.5	1,632,719	−4.1
North Dakota	338	4,086	−3.4	81,431	−3.1	57	879	−8.6	17,545	−7.6
Ohio	4,896	424,945	+.3	8,142,449	+2.9	1,838	302,145	−1.1	5,571,784	+2.2
Oklahoma	804	31,430	−.1	617,457	+.5	127	10,144	−2.4	180,052	−1.9
Oregon	697	30,673	−9.8	604,140	−7.4	155	17,835	−9.3	316,410	−9.7
Pennsylvania	4,661	655,709	−2.0	12,615,326	−1.5	*1,754*	*377,833*	*−3.0*	*6,559,171*	*−2.7*
Rhode Island	883	54,626	−5.9	998,053	−5.1	252	41,377	−8.7	691,538	−8.2
South Carolina	414	59,140	−1.7	732,680	−3.2	174	54,505	−2.4	665,131	−4.0
South Dakota	259	6,232	−.2	151,424	+2.0	44	2,168	−.8	45,356	+6.1
Tennessee	727	65,160	−.7	983,642	−.1	252	46,451	−2.9	666,431	−2.3
Texas	*785*	*54,504*	*+.4*	*1,069,673*	*+1.8*	*378*	*33,598*	*−.8*	*633,544*	*+1.7*
Utah	327	15,511	−4.4	312,582	−[6]	76	6,235	−7.7	115,631	−2.8
Vermont	378	9,966	−1.7	179,049	−2.1	110	5,240	−1.2	92,187	+1.7
Virginia	1,259	89,094	−.9	1,459,656	−.4	391	61,818	−.8	952,271	−.4
Washington	1,137	57,607	+.4	1,139,799	−.8	246	29,045	+2.1	531,991	−.8
West Virginia	869	117,868	−1.1	2,133,488	−4.5	177	45,062	−.5	827,394	−2.9
Wisconsin	[9] *1,043*	*148,612*	*−.8*	*2,571,242*	*−1.5*	*776*	*117,616*	[5] *−2.3*	*1,982,815*	[5] *−4.0*
Wyoming	192	6,192	−3.9	151,621	+2.3	25	1,525	−15.0	38,216	−15.0

[1] Includes automobile dealers and garages, and sand, gravel, and building construction.
[2] Includes banks, insurance, and office employment.
[3] Includes building and contracting.
[4] Includes construction, municipal, agricultural, and office employment, amusement and recreation, professional, and transportation services.
[5] Weighted percent of change.
[6] Less than one tenth of 1 percent.
[7] Includes laundries.
[8] Includes laundering and cleaning.
[9] Includes construction but does not include hotels and restaurants, and public works.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN **IDENTICAL** ESTABLISHMENTS IN NOVEMBER AND DECEMBER 1933, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Wholesale trade					Retail trade				
	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change
Alabama	14	594	+2.9	$16,872	+12.6	67	2,735	+16.8	$43,991	+11.8
Arizona	24	220	+5.8	5,548	−.9	181	2,161	+18.1	32,259	+3.8
Arkansas	*21*	*540*	*−2.5*	*14,099*	*−3.1*	*119*	*1,702*	*−.9*	*19,411*	*−3.6*
California	*105*	*5,802*	*−.3*	*161,342*	*−.2*	*117*	*30,441*	*+22.0*	*591,713*	*+16.8*
Colorado	28	936	−2.4	25,837	−2.3	278	4,887	+12.4	89,319	+7.4
Connecticut	56	1,011	+1.8	29,620	+1.4	120	5,875	+10.8	110,316	+6.3
Delaware	7	115	+2.7	2,331	+1.7	33	722	+16.3	13,458	+9.8
Dist. of Columbia	29	423	+1.0	12,471	+1.0	415	14,724	+12.9	277,891	+7.4
Florida	69	990	−3.0	22,568	+.6	100	2,758	+21.6	47,929	+18.1
Georgia	34	638	−2.9	16,211	−.5	367	5,533	+8.2	83,999	+2.8
Idaho	10	133	−4.3	3,396	−.1	67	927	+1.1	14,759	+([6])
Illinois	*47*	*2,318*	*−6.4*	*55,778*	*−4.5*	*150*	*28,054*	*+6.5*	*541,641*	*+6.1*
Indiana	78	1,736	−3.0	39,991	−1.9	190	8,467	+16.4	142,013	+11.5
Iowa	38	1,132	−.4	27,713	+1.4	122	3,896	+11.6	63,592	+7.1
Kansas	*82*	*2,101*	*−1.5*	*48,866*	*−.4*	*456*	*7,058*	*+9.1*	*117,836*	*+2.7*
Kentucky	23	474	+9.2	9,964	+5.3	72	4,149	+12.9	65,786	+6.3
Louisiana	24	666	+.5	15,404	+2.2	23	3,688	+2.3	56,712	+7.9
Maine	19	452	+.2	10,661	+1.8	64	1,162	+7.7	20,425	+7.5
Maryland	*54*	*756*	*−.3*	*17,026*	*+2.6*	*38*	*8,838*	*+20.4*	*144,709*	*+16.6*
Massachusetts	*711*	*15,317*	*−1.5*	*394,507*	*−.8*	*4,166*	*74,992*	*+10.2*	*1,405,178*	*+7.1*
Michigan	66	2,993	+12.6	73,406	+13.3	156	16,451	+25.0	295,355	+18.3
Minnesota	78	5,255	−.3	134,518	−.2	283	10,012	+2.0	158,336	+2.4
Mississippi	4	126	+10.5	2,386	+7.7	46	595	+24.2	5,729	+9.8
Missouri	61	4,892	−.5	125,285	+.1	138	12,619	+12.9	228,999	+11.1
Montana	14	244	+.8	7,323	+3.0	69	1,053	+9.5	19,133	+4.3
Nebraska	35	1,068	+4.6	26,572	+.9	192	2,360	+11.4	40,483	+3.8
Nevada	8	113	−1.7	3,426	+.7	40	261	+4.0	5,756	+5.4
New Hampshire	16	168	([10])	4,377	+1.1	70	1,124	+14.2	14,712	+5.1
New Jersey	24	651	−.8	17,996	+.1	417	11,193	+23.4	224,755	+16.3
New Mexico	6	79	−9.2	2,938	−2.1	49	249	+.4	5,975	+.7
New York	441	13,910	+.4	422,554	+2.1	4,095	103,867	+20.9	2,044,653	+13.7
North Carolina	16	189	−2.1	4,034	−1.9	157	776	+10.4	14,000	−4.2
North Dakota	15	248	−1.2	6,538	+2.1	13	349	+8.0	4,899	+7.3
Ohio	241	5,553	+.2	135,729	−.5	1,510	44,617	+16.5	791,080	+12.8
Oklahoma	53	1,014	−.4	22,125	+2.7	157	3,142	+7.6	55,585	+1.3
Oregon	51	1,377	−.1	35,418	+1.7	178	2,454	+5.2	46,339	+.4
Pennsylvania	125	3,606	+.1	94,851	+.4	372	37,102	+15.1	697,049	+13.3
Rhode Island	42	1,101	+1.6	26,575	+2.7	475	6,153	+9.3	110,291	+3.6
South Carolina	14	205	−2.4	4,846	−.6	115	1,653	+21.5	16,487	+10.2
South Dakota	9	115	−2.5	2,916	−.3	15	162	+5.9	2,587	+1.3
Tennessee	37	863	−2.7	17,850	−.4	58	4,845	+23.5	72,879	+19.1
Texas	*144*	*3,249*	*+1.1*	*78,642*	*+.7*	*76*	*7,414*	*+7.6*	*123,429*	*+4.7*
Utah	14	500	−1.2	12,423	+.4	71	575	+8.3	12,494	+4.1
Vermont	5	117	+1.7	2,709	+.4	39	547	+20.2	8,314	+18.4
Virginia	41	1,150	−4.2	25,328	−3.5	476	6,052	+15.0	106,035	+8.4
Washington	108	2,333	+.5	60,221	+.6	389	8,612	+28.9	142,598	+13.8
West Virginia	27	610	+2.2	15,986	+3.5	52	1,174	+23.8	17,882	+12.1
Wisconsin	*46*	*2,225*	*−1.2*	*46,907*	*−1.8*	*51*	*13,173*	*+18.8*	*174,286*	*+13.8*
Wyoming	8	61	([10])	1,717	−.6	44	271	+4.2	5,825	−1.0

[6] Less than one tenth of 1 percent.
[10] No change.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN **IDENTICAL** ESTABLISHMENTS IN NOVEMBER AND DECEMBER 1933, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Quarrying and nonmetallic mining					Metalliferous mining				
	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change
Alabama	20	798	−7.4	$9,492	+11.9	9	1,630	−7.1	$22,382	+(9)
Arizona	3	51	+27.5	530	+2.5	21	2,294	−.7	54,738	+6.6
Arkansas	9	239	+46.6	3,061	+72.9					
California	37	1,032	−7.8	16,554	−23.7	*35*	*2,996*	*−.5*	*72,743*	*−.1*
Colorado	5	30	−31.8	319	−51.4	14	1,044	−2.3	27,583	+3.4
Connecticut	26	257	−25.9	3,887	−31.0					
Delaware	3	60	−17.8	810	−37.9					
Dist. of Columbia										
Florida	18	952	+7.7	11,250	+7.4					
Georgia	23	1,142	−3.0	11,137	−6.3					
Idaho										
Illinois	23	633	−10.1	10,096	−16.2	9	2,144	−.7	49,535	+1.7
Indiana	71	1,324	−16.6	19,393	−17.5					
Iowa	33	390	−18.1	5,193	−20.2					
Kansas	*26*	*1,184*	*−5.4*	*21,864*	*−1.2*	*14*	*1,155*	*+6.1*	*23,429*	*−2.0*
Kentucky	38	945	−10.0	10,392	−8.0					
Louisiana	7	603	−4.7	9,113	−.9					
Maine	9	422	+3.4	6,383	−3.8					
Maryland	*14*	*212*	*−27.2*	*2,510*	*−35.6*					
Massachusetts	22	337	−22.9	6,505	−27.1					
Michigan	47	1,039	−25.0	14,988	−33.1	39	4,187	+5.4	61,344	+9.1
Minnesota	27	321	−15.5	4,944	−16.9	32	1,467	+2.2	25,104	−2.2
Mississippi	11	219	+2.8	2,521	+9.9					
Missouri	52	1,261	−5.8	17,214	−7.8	15	1,725	(10)	22,844	−3.2
Montana	9	44	−21.4	647	−15.1	16	2,378	−4.7	68,483	+1.3
Nebraska	10	136	−50.7	1,879	−51.9					
Nevada						14	361	−14.5	8,740	−11.8
New Hampshire	11	135	−17.7	2,531	−29.2					
New Jersey	39	583	−18.8	9,820	−26.6	3	17	+21.4	339	+1.2
New Mexico						5	924	−2.9	17,834	+5.7
New York	80	1,815	−17.6	36,128	−3.1					
North Carolina	14	385	−12.5	4,709	−2.2					
North Dakota										
Ohio	131	2,971	−16.0	41,821	−14.5					
Oklahoma	14	206	−23.1	1,574	−30.2	32	1,552	+2.6	25,734	+5.5
Oregon	5	62	−18.4	1,116	−1.2	7	83	(10)	1,677	+1.7
Pennsylvania	158	4,716	−10.3	58,611	−19.0					
Rhode Island										
South Carolina	4	64	−3.0	435	−24.9					
South Dakota	4	34	−19.0	524	−25.5					
Tennessee	22	1,254	−.8	16,634	+1.1	4	311	−.3	5,820	−5.0
Texas	*21*	*599*	*+33.7*	*12,195*	*+41.4*					
Utah	7	162	−15.2	2,541	+.4	12	2,035	+1.9	41,349	+3.1
Vermont	38	2,050	−7.6	36,306	−12.7					
Virginia	30	1,100	−14.3	9,171	−20.1					
Washington	14	169	−36.5	3,109	−34.7					
West Virginia	20	785	−8.2	9,322	−17.7					
Wisconsin	*14*	*144*	*−27.3*	*2,194*	*−18.9*	(11)	*231*	*+12.7*	*5,038*	*+15.8*
Wyoming										

[9] Less than one tenth of 1 percent.
[10] No change.
[11] Not available.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN **IDENTICAL** ESTABLISHMENTS IN NOVEMBER AND DECEMBER 1933, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Bituminous-coal mining					Crude-petroleum producing				
	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change
Alabama	47	8,622	−0.8	$110,460	+5.1					
Arizona										
Arkansas	*3*	*99*	*−30.7*	*3,513*	*−23.3*	8	461	+1.3	$10,540	−1.8
California						36	7,886	+.4	234,359	+2.4
Colorado	52	5,419	(10)	95,551	+.4					
Connecticut										
Delaware										
Dist. of Columbia										
Florida										
Georgia										
Idaho										
Illinois	*32*	*7,423*	*+3.2*	*142,732*	*+6.7*	9	226	+10.2	4,651	+8.3
Indiana	51	5,918	+3.0	128,498	+5.6	4	24	−14.3	348	−12.1
Iowa	20	2,069	−3.7	37,062	+3.0					
Kansas	*27*	*1,431*	*−1.8*	*26,980*	*−1.3*	26	1,637	+6.2	36,808	+3.3
Kentucky	152	28,907	−4.7	396,677	−18.2	5	242	+5.7	3,387	+10.9
Louisiana						8	232	+3.6	5,681	+6.6
Maine										
Maryland	*16*	*1,544*	*+.5*	*28,433*	*+22.2*					
Massachusetts										
Michigan	3	884	+9.0	18,854	+21.5					
Minnesota										
Mississippi										
Missouri	20	1,791	+3.9	25,100	+2.8					
Montana	10	773	−.4	20,323	−6.2	3	28	+3.7	456	−4.8
Nebraska										
Nevada										
New Hampshire										
New Jersey										
New Mexico	14	1,838	+36.8	34,979	+52.2	4	35	(10)	891	−1.9
New York						5	218	+10.1	4,583	−8.7
North Carolina										
North Dakota	8	486	−15.6	9,857	−12.9					
Ohio	78	12,353	−6.7	229,319	−4.4	6	59	−11.9	768	+.3
Oklahoma	19	804	−11.3	13,238	−15.0	62	5,986	+2.1	144,699	+4.7
Oregon										
Pennsylvania	456	71,627	+7.7	1,276,022	+11.8	19	807	−.4	17,319	−7.8
Rhode Island										
South Carolina										
South Dakota										
Tennessee	21	2,445	−1.5	31,830	−.5					
Texas	5	352	−1.1	5,696	−4.6	42	9,770	+8.5	280,549	+11.4
Utah	15	2,238	+5.9	53,766	+7.8					
Vermont										
Virginia	38	8,405	−5.4	145,303	−3.1					
Washington	11	1,328	+.8	33,708	+4.1					
West Virginia	366	61,864	−2.0	1,073,693	−6.8	8	410	−5.3	8,538	+1.1
Wisconsin										
Wyoming	31	3,316	+.3	82,996	+14.2	7	177	−1.1	4,761	−1.9

[10] No change.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS IN NOVEMBER AND DECEMBER 1933, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Public utilities					Hotels				
	Number of establishments	Number on pay roll December 1933	Per cent of change	Amount of pay roll (1 week) December 1933	Per cent of change	Number of establishments	Number on pay roll December 1933	Per cent of change	Amount of pay roll (1 week) December 1933	Per cent of change
Alabama	89	1,769	+1.0	$36,820	−0.4	25	1,271	+8.2	$10,625	+9.8
Arizona	68	1,558	+6.4	36,030	+2.4	19	455	+6.1	6,724	+8.5
Arkansas	*57*	*1,876*	*−1.2*	*35,585*	*−2.4*	*16*	*695*	*+3.3*	*5,684*	*+7.0*
California	*46*	*42,784*	*+.6*	*1,179,136*	+(6)	*167*	*8,596*	*+.7*	*129,890*	*−.6*
Colorado	192	5,286	+.5	131,615	+.6	51	1,259	+1.9	17,088	+.5
Connecticut	135	9,639	+1.0	292,511	+.5	25	1,030	+1.4	12,683	+2.2
Delaware	28	1,116	−.7	31,307	−.1	6	261	+2.4	3,615	+5.3
Dist. of Columbia	21	8,666	+1.3	231,475	+.9	44	4,199	+4.2	62,070	+7.8
Florida	184	4,464	+.6	112,564	+2.9	71	1,856	+27.0	20,206	+42.9
Georgia	186	6,519	−.2	179,161	−.5	22	898	+12.1	7,059	+17.1
Idaho	56	773	+.9	15,174	+1.7	20	343	−1.2	4,022	+1.3
Illinois	*82*	*70,641*	*−.9*	*1,901,346*	*−2.3*	[12] *44*	*8,393*	*−5.2*	*131,698*	*−1.7*
Indiana	135	9,116	−2.7	217,703	−.9	74	2,778	−3.0	28,030	−.6
Iowa	431	10,316	+9.1	221,912	+5.8	56	2,196	−1.8	20,314	−2.4
Kansas	[13] *126*	*7,490*	*−.3*	*172,172*	*−.9*	*31*	*696*	*+1.6*	*7,418*	*−.3*
Kentucky	289	6,139	−.8	139,751	−.8	34	1,938	+7.3	19,893	+10.0
Louisiana	148	5,487	+(6)	137,195	+2.2	21	1,655	+.6	17,433	+2.7
Maine	168	2,692	+1.5	70,401	+1.5	22	701	−12.2	8,727	−6.0
Maryland	*93*	*12,401*	*−1.9*	*345,248*	*+1.5*	*25*	*1,349*	*+4.1*	*15,701*	*+.9*
Massachusetts	*131*	*45,199*	*−.5*	*1,272,862*	*+1.4*	*81*	*5,061*	*+4.5*	*69,761*	*+5.3*
Michigan	414	22,717	+(6)	663,944	−2.1	93	4,618	+3.1	55,043	+9.4
Minnesota	232	12,491	−1.1	313,027	+.4	73	3,228	−1.2	36,926	−1.3
Mississippi	190	1,760	+5.0	35,574	+2.0	17	395	−4.6	2,725	−3.2
Missouri	179	19,239	−.1	502,393	+.5	85	4,412	+3.5	52,761	+4.1
Montana	100	1,968	−.7	55,987	−2.0	28	433	+1.2	5,704	+.1
Nebraska	299	5,593	−.2	138,847	−.7	40	1,800	+19.9	16,435	+12.3
Nevada	38	386	−8.3	10,763	−2.1	8	82	−5.7	1,456	−6.8
New Hampshire	140	2,269	+1.9	59,350	+2.5	10	169	−6.1	2,134	−.2
New Jersey	265	21,388	+1.1	595,420	+.6	54	2,988	+7.7	34,663	+9.2
New Mexico	53	565	−2.1	11,606	−.5	14	315	−2.5	3,221	−1.3
New York	857	98,620	+.4	3,015,387	+.1	240	30,895	+3.0	486,977	+6.0
North Carolina	92	1,694	+.3	35,240	−1.2	33	1,284	+15.4	10,474	+15.6
North Dakota	171	1,221	−.5	29,052	+(6)	22	398	+3.9	3,634	+.2
Ohio	481	33,521	+.3	886,897	+2.4	140	8,898	+2.9	109,530	+6.2
Oklahoma	242	5,854	+.1	132,290	+.3	49	1,147	+.6	11,742	−1.3
Oregon	183	5,495	−.7	136,411	−.6	58	1,144	−2.2	14,263	+.9
Pennsylvania	*597*	*43,560*	−(6)	*1,195,878*	*+.4*	158	9,102	+1.3	115,323	+3.8
Rhode Island	42	3,339	+1.2	97,905	+3.5	11	145	+6.6	1,761	+10.8
South Carolina	70	1,671	+4.5	34,178	+4.1	16	412	−.5	3,442	+8.5
South Dakota	129	1,023	−2.3	24,808	−1.4	18	298	+3.1	3,623	+3.7
Tennessee	245	4,513	+.7	100,408	+.4	36	2,096	+.7	17,749	+3.5
Texas	*126*	*5,664*	*−3.9*	*150,269*	*−.6*	*38*	*2,899*	*−.9*	*36,283*	*−3.2*
Utah	69	1,840	−3.5	37,132	−3.4	11	393	+2.1	4,810	+2.0
Vermont	122	1,112	+.3	26,103	−3.2	24	510	−6.6	4,933	−7.3
Virginia	179	5,910	+.3	140,675	−.4	29	1,751	−7.8	18,636	−4.9
Washington	196	9,651	−.1	259,359	+.8	80	2,495	+1.9	28,967	+2.8
West Virginia	117	5,508	+.9	142,090	+1.5	36	1,100	+2.1	11,680	+2.8
Wisconsin	[14] *41*	*10,550*	*−.8*	*294,815*	*−1.8*	[13] *43*	*1,260*	*−.2*	(11)	------
Wyoming	48	453	+.2	10,444	+(6)	7	102	−4.7	1,382	−2.2

[6] Less than one tenth of 1 percent.
[11] Not available.
[12] Includes restaurants.
[13] Includes steam railroads.
[14] Includes railways and express.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN IDENTICAL ESTABLISHMENTS IN NOVEMBER AND DECEMBER 1933, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Laundries					Dyeing and cleaning				
	Number of establishments	Number on pay roll December 1933	Per cent of change	Amount of pay roll (1 week) December 1933	Per cent of change	Number of establishments	Number on pay roll December 1933	Per cent of change	Amount of pay roll (1 week) December 1933	Per cent of change
Alabama	18	1,027	−1.2	$9,143	+0.4	4	98	−15.5	$1,075	−5.9
Arizona	11	422	+2.4	5,743	+3.3					
Arkansas	*12*	*320*	*+1.3*	*3,141*	*+11.7*	3	36	−14.3	416	−11.1
California	[15] *70*	*5,365*	*−1.9*	*96,960*	*−1.5*					
Colorado	29	1,176	−.8	15,413	−([6])	10	140	−4.1	2,403	−2.6
Connecticut	44	1,663	−1.5	26,352	−.1	7	185	−10.2	3,531	−14.3
Delaware	3	232	−.9	4,008	+.6					
Dist. of Columbia	18	2,517	−.5	39,813	+.1	5	113	−2.6	2,040	−4.6
Florida	21	970	+6.8	9,292	+13.7	12	123	+1.7	2,017	+10.2
Georgia	29	2,282	−1.6	23,898	+2.3	3	87	+1.2	1,018	+2.8
Idaho	16	293	+1.7	4,385	+.5					
Illinois	[15] *26*	*1,515*	*−1.6*	*21,093*	*−.8*					
Indiana	46	1,919	−1.7	25,041	−1.4	10	173	−12.2	2,725	−13.6
Iowa	31	1,086	−1.1	14,614	−.3	6	221	−1.3	3,634	−3.9
Kansas	[15] *38*	*904*	*−2.0*	*11,847*	*+2.6*					
Kentucky	31	1,502	+.5	18,609	+3.3	4	153	+2.7	2,281	+7.6
Louisiana	6	377	−1.3	3,827	−.2	4	75	−1.3	833	−1.8
Maine	27	566	−2.2	8,051	−.5					
Maryland	*23*	*1,779*	*+1.5*	*26,603*	*−1.7*	*10*	*160*	*−11.6*	*2,676*	*−11.7*
Massachusetts	*114*	*3,797*	*−1.2*	*61,429*	−([6])	*80*	*1,793*	*−9.6*	*27,392*	*−21.3*
Michigan	58	2,458	−.8	32,885	+.6	15	491	−5.9	9,136	−6.9
Minnesota	38	1,509	−.3	22,339	+.1	13	401	−7.8	6,598	−6.3
Mississippi	11	325	−12.9	2,925	−11.2					
Missouri	50	2,939	+23.9	39,603	+22.4	13	450	+.9	7,417	−2.4
Montana	14	325	+.3	5,459	+.6	3	20	([10])	432	−2.7
Nebraska	13	720	−5.4	9,325	−7.5	4	99	+1.0	1,723	−3.1
Nevada	3	37	+2.8	616	−.2					
New Hampshire	16	268	−1.5	3,926	−1.5					
New Jersey	41	4,543	−.9	82,466	−.6	8	209	−11.1	4,815	−13.9
New Mexico	4	189	−.5	2,760	+.4					
New York	68	6,704	−1.4	116,631	−1.7	16	406	−9.8	7,323	−14.4
North Carolina	14	762	−2.1	8,125	−1.8					
North Dakota	11	207	−1.0	2,953	−5.5					
Ohio	74	3,799	−.7	57,666	+2.7	38	1,459	−3.2	25,227	−3.8
Oklahoma	17	790	−1.4	9,685	+([6])	8	168	−5.1	2,360	−3.6
Oregon	8	303	−1.9	4,392	+.5	3	42	−8.7	781	−6.0
Pennsylvania	39	2,749	−1.6	41,785	−.8	18	865	−3.7	14,169	−8.6
Rhode Island	23	1,159	−2.4	18,753	−4.8	5	271	−13.7	4,463	−21.8
South Carolina	8	336	−1.5	3,391	+3.0					
South Dakota	7	179	−3.2	2,272	−6.2					
Tennessee	13	1,178	−1.4	11,057	+1.3	4	51	−1.9	621	−3.9
Texas	21	983	−.2	10,138	−1.1	13	419	−5.4	6,929	+.3
Utah	11	644	+1.9	9,294	+3.0	7	97	−11.8	1,558	−15.6
Vermont	9	141	+.7	1,695	−3.7					
Virginia	17	989	−4.2	10,925	−4.3	18	265	−10.8	3,713	−8.5
Washington	11	389	−1.0	6,456	−.6	7	52	−7.1	831	−8.5
West Virginia	16	551	+2.0	6,814	+2.2	7	203	−2.9	2,689	−2.4
Wisconsin	[15] *28*	*922*	*−1.8*	*12,023*	*+.1*					
Wyoming	7	142	+4.4	2,288	+5.5					

[6] Less than one tenth of 1 percent.
[10] No change.
[15] Includes dyeing and cleaning.

COMPARISON OF EMPLOYMENT AND PAY ROLLS IN **IDENTICAL** ESTABLISHMENTS IN NOVEMBER AND DECEMBER 1933, BY STATES—Continued

[Figures in italics are not compiled by the Bureau of Labor Statistics, but are taken from reports issued by cooperating State organizations]

State	Banks, brokerage, insurance, and real estate				
	Number of establishments	Number on pay roll December 1933	Percent of change	Amount of pay roll (1 week) December 1933	Percent of change
Alabama	17	470	+0.4	$13,641	+2.4
Arizona	27	194	(18)	5,210	+1.6
Arkansas	19	243	+1.7	5,796	+.2
California	1,138	23,127	−.5	755,456	−.5
Colorado	29	1,002	+.8	35,328	−2.6
Connecticut	59	1,999	+.8	74,569	+6.8
Delaware	15	561	−.2	19,308	−.3
District of Columbia	41	1,343	−.3	48,472	+1.9
Florida	18	574	+.7	18,573	+7.9
Georgia	29	1,121	(18)	33,466	+3.0
Idaho	15	136	+2.3	3,269	+1.4
Illinois	94	10,735	−1.0	381,887	+1.6
Indiana	44	1,573	−10.9	50,138	−8.5
Iowa	17	972	−1.1	31,290	+.2
Kansas	*52*	*801*	−.1	*25,238*	+1.2
Kentucky	21	836	−.1	30,158	+2.6
Louisiana	10	385	+1.6	14,653	+7.0
Maine	16	256	+1.2	6,562	−.3
Maryland	24	855	−.2	31,980	+2.2
Massachusetts	[19] *273*	*7,328*	(18)	*216,428*	+.6
Michigan	94	4,367	+1.1	139,885	+4.4
Minnesota	56	4,766	+2.8	132,444	+3.1
Mississippi	16	189	(18)	4,175	+.2
Missouri	85	4,744	+.2	148,048	+6.5
Montana	21	244	(18)	6,961	+1.2
Nebraska	18	537	−.6	18,714	+2.4
Nevada					
New Hampshire	39	460	−.9	10,996	−.4
New Jersey	126	12,691	+.5	363,095	+.1
New Mexico	15	81	+3.8	2,340	+2.4
New York	726	53,209	−.2	1,884,034	+1.2
North Carolina	29	611	+1.5	15,560	+1.7
North Dakota	38	273	−.7	6,546	−.3
Ohio	295	8,075	−.2	273,992	+3.7
Oklahoma	24	623	+2.0	18,373	+3.0
Oregon	25	1,191	+.9	39,446	+13.6
Pennsylvania	*578*	*18,387*	−.1	*592,705*	+1.6
Rhode Island	31	1,063	−.4	46,479	+3.6
South Carolina	11	118	+5.4	3,252	−2.8
South Dakota	31	239	+1.3	5,950	+.3
Tennessee	34	1,152	+.2	42,347	+6.4
Texas	30	1,525	+.1	43,129	+.1
Utah	14	463	+.4	17,255	+7.0
Vermont	28	226	(18)	6,442	−.4
Virginia	32	1,362	+.1	44,622	+2.0
Washington	38	1,383	−.4	43,841	+2.8
West Virginia	43	601	+.2	17,400	−.3
Wisconsin	17	918	+.2	31,690	+2.6
Wyoming	11	88	−3.3	2,693	−2.8

[18] No change.
[19] Does not include brokerage and real estate.

Employment and Pay Rolls in December 1933 in Cities of Over 500,000 Population

IN THE following table are presented the fluctuations in employment and pay-roll totals in December 1933 as compared with November 1933 in 13 cities of the United States having a population of 500,000 or over. These changes are computed from reports received from identical establishments in each of the months considered.

In addition to including reports received from establishments in the several industrial groups regularly covered in the Bureau's survey, excluding building construction, reports have also been secured from other establishments in these cities for inclusion in these totals. Information concerning employment in building construction is not available for all cities at this time and therefore has not been included.

FLUCTUATIONS IN EMPLOYMENT AND PAY ROLLS IN DECEMBER 1933 AS COMPARED WITH NOVEMBER 1933

Cities	Number of establishments reporting in both months	Number on pay roll		Percent of change	Amount of pay roll (1 week)		Percent of change
		November 1933	December 1933		November 1933	December 1933	
New York City	5,189	347,628	361,420	+4.0	9,030,127	9,213,669	+2.0
Chicago, Ill	1,822	240,889	234,196	−2.8	5,546,811	5,529,152	−.3
Philadelphia, Pa	780	147,704	145,521	−1.5	3,206,773	3,164,030	−1.3
Detroit, Mich	546	163,388	181,260	+10.9	3,538,993	3,879,661	+9.6
Los Angeles, Calif	805	74,182	76,758	+3.5	1,759,821	1,781,071	+1.2
Cleveland, Ohio	1,121	95,813	99,640	+4.0	1,915,801	1,994,564	+4.1
St. Louis, Mo	512	67,353	68,297	+1.4	1,364,751	1,410,909	+3.4
Baltimore, Md	562	53,658	53,135	−.1	1,052,879	1,054,049	+.1
Boston, Mass	3,569	94,185	94,759	+.6	2,291,559	2,290,904	−(1)
Pittsburgh, Pa	381	52,694	54,880	+4.1	1,082,889	1,111,407	+2.6
San Francisco, Calif	1,126	49,151	49,735	+1.2	1,179,965	1,197,390	+1.5
Buffalo, N.Y	425	42,065	42,870	+1.9	919,549	962,458	+4.7
Milwaukee, Wis	449	43,825	43,706	−.3	874,697	886,262	+1.3

[1] Less than one tenth of 1 percent.

Employment in the Various Branches of the Federal Government, December 1933

THERE were 591,675 employees on the pay rolls of the executive departments of the United States Government on December 31, 1933. This is an increase of 27,572 employees or 4.9 percent as compared with December 31, 1932, and an increase of 3,640 employees or 0.6 percent, as compared with November 30, 1933.

The information shown in table 1 is compiled by the various departments and offices of the United States Government and sent to the United States Civil Service Commission where it is assembled. The figures were tabulated by the Bureau of Labor Statistics and are published here in compliance with the direction of Congress.

Table 1 shows the number of employees in the executive departments of the Federal Government inside of the District of Columbia,

the number outside the District of Columbia, and the total number of such employees.

Approximately 12 percent of the workers in the executive branch of the United States Government are located in the city of Washington.

TABLE 1.—EMPLOYEES IN THE EXECUTIVE CIVIL SERVICE OF THE UNITED STATES DECEMBER 1932 AND NOVEMBER AND DECEMBER 1933

Item	District of Columbia			Outside the District			Entire Service		
	Permanent	Temporary[1]	Total	Permanent	Temporary[1]	Total	Permanent	Temporary[1]	Total
Number of employees:									
December 1932	64,214	2,088	66,302	468,769	29,032	497,801	532,983	31,120	564,103
November 1933	65,830	7,301	73,131	459,965	54,939	514,904	525,795	62,240	588,035
December 1933	66,894	8,556	75,450	463,618	52,607	516,225	530,512	61,163	591,675
Gain or loss:									
December 1932–December 1933	+2,680	+6,468	+9,148	−5,151	+23,575	+18,424	−2,471	+30,043	+27,572
November 1933–December 1933	+1,064	+1,255	+2,319	+3,653	−2,332	+1,321	+4,717	−1,077	+3,640
Percent of change:									
December 1932–December 1933	+4.2	+309.8	+13.8	−1.1	+81.2	+3.7	−.5	+96.5	+4.9
November 1933–December 1933	+1.6	+17.2	+3.2	+.8	−4.2	+.3	+.9	−1.7	+.6
Labor Turnover—December 1933:									
Additions	1,900	1,881	3,781	7,451	24,819	32,270	9,610	26,700	36,310
Separations	836	626	1,462	4,057	27,151	31,208	4,893	27,777	32,670
Turnover rate per 100	1.26	7.90	1.97	.88	46.16	6.05	.93	43.27	5.54

[1] Not including field employees of the Post Office Department.

Comparing December 1933 with December 1932, there was an increase of 9,148 or 13.8 percent in the number of employees on the pay rolls of the executive departments of the United States Government in the District of Columbia. The number of permanent employees increased 4.2 percent while temporary employees increased over 300 percent during the same period. The increase in the number of temporary employees is due to the creation of the emergency Government units such as the Public Works Administration, National Recovery Administration, Agricultural Adjustment Administration, etc.

Comparing December 1933 with November 1933, there was an increase of 1.6 percent in the number of permanent employees, an increase of 17.2 percent in the number of temporary employees, and an increase of 3.2 percent in total employment in the executive departments in the District of Columbia.

The turn-over rate for the entire executive service within the District of Columbia was 1.97.

Outside of the District of Columbia the number of permanent employees decreased 1.1 percent and the number of temporary employees increased 81.2 percent, comparing December 1933 with December 1932.

Comparing December 1933 with November 1933, there was an increase of 0.8 percent in the number of permanent employees and a decrease of 4.2 percent in the number of temporary employees, making a net increase of 0.3 percent in employment in the executive Federal departments outside of the District of Columbia.

The pay roll for the executive departments throughout the United States for the month of November was $75,977,254. December pay rolls totalled $80,414,086.

Table 2 shows employment in the executive departments of the United States, by months, for the calendar year 1933.

TABLE 2.—EMPLOYMENT IN THE EXECUTIVE DEPARTMENTS OF THE UNITED STATES BY MONTHS, 1933, FOR DISTRICT OF COLUMBIA, OUTSIDE DISTRICT OF COLUMBIA, AND TOTALS

Months	District of Columbia	Outside District of Columbia	Totals	Months	District of Columbia	Outside District of Columbia	Totals
January	66,800	496,361	563,161	July	66,062	488,990	555,052
February	66,802	496,685	563,487	August	67,715	488,624	556,339
March	67,557	499,429	566,986	September	69,740	496,616	566,356
April	67,063	501,665	568,728	October	71,054	506,116	577,170
May	66,560	507,346	573,906	November	73,131	514,904	588,035
June	65,437	499,995	565,432	December	75,450	530,512	591,675

The high point in employment in the executive departments of the Federal Government for 1933 occurred in December. The peak employment both inside and outside the District occurred that month.

The low point in employment during 1933 occurred in July, when there were 555,052 on the pay rolls of the executive departments throughout the United States. The low for the District of Columbia occurred in June, while outside the District of Columbia fewer people were on the pay rolls in August than any other month of the year.

Table 3 shows the number of employees and amounts of pay rolls in the various branches of the United States Government during November and December 1933.

TABLE 3.—NUMBER OF EMPLOYEES AND AMOUNTS OF PAY ROLLS IN THE VARIOUS BRANCHES OF THE UNITED STATES GOVERNMENT, NOVEMBER AND DECEMBER 1933

Branch of service	Employees		Pay roll	
	November	December	November	December
Executive service	588,035	591,675	$75,977,254	$80,414,086
Military service	263,017	263,622	18,271,482	17,656,909
Judicial service	1,864	1,872	425,219	432,435
Legislative service	(1)	3,864	(1)	886,781
Total	[2] 852,916	861,033	[2] 94,673,955	99,390,211

[1] Data not available.
[2] See notes to details.

Employment on Class I Steam Railroads in the United States

REPORTS of the Interstate Commerce Commission for class I railroads show that the number of employees (exclusive of executives and officials) decreased from 985,434 on November 15, 1933, to 952,275 on December 15, 1933, or 3.4 percent. Data are not yet available concerning total compensation of employees for December 1933. The latest pay-roll information available shows a decrease from $121,981,119 in October to $114,470,607 in November, or 6.2 percent.

The monthly trend of employment from January 1923 to December 1933 on class I railroads—that is, all roads having operating revenues of $1,000,000 or over—is shown by index numbers published in the following table. These index numbers are constructed from monthly reports of the Interstate Commerce Commission, using the 12-month average for 1926 as 100.

TABLE 1.—INDEXES OF EMPLOYMENT ON **CLASS I STEAM RAILROADS** IN THE UNITED STATES, JANUARY 1923 TO DECEMBER 1933

[12-month average, 1926=100]

Month	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
January	98.3	96.6	95.6	95.8	95.5	89.4	88.2	86.3	73.3	61.2	53.0
February	98.6	97.0	95.4	96.0	95.3	89.0	88.9	85.4	72.7	60.3	52.7
March	100.5	97.4	95.2	96.7	95.8	89.9	90.1	85.5	72.9	60.5	51.5
April	102.0	98.9	96.6	98.9	97.4	91.7	92.2	87.0	73.5	60.0	51.8
May	105.0	99.2	97.8	100.2	99.4	94.5	94.9	88.6	73.9	59.7	52.5
June	107.1	98.0	98.6	101.6	100.9	95.9	96.1	86.5	72.8	57.8	53.6
July	108.2	98.1	99.4	102.9	101.0	95.6	96.6	84.7	72.4	56.4	55.4
August	109.4	99.0	99.7	102.7	99.5	95.7	97.4	83.7	71.2	55.0	56.8
September	107.8	99.7	99.9	102.8	99.1	95.3	96.8	82.2	69.3	55.8	57.7
October	107.3	100.8	100.7	103.4	98.9	95.3	96.9	80.4	67.7	57.0	57.5
November	105.2	99.0	99.1	101.2	95.7	92.9	93.0	77.0	64.5	55.9	55.9
December	99.4	96.0	97.1	98.2	91.9	89.7	88.8	74.9	62.6	54.8	54.0
Average	104.1	98.3	97.9	100.0	97.5	92.9	93.3	83.5	70.6	57.9	54.4

Table 2 shows the total number of employees by occupations on the 15th day of October and November 1933 and by group totals on December 15, 1933; also, pay-roll totals for the entire months of October and November. Total compensation for the month of December is not yet available. Beginning in January 1933 the Interstate Commerce Commission excluded reports of switching and terminal companies from its monthly tabulations. The actual figures for the months shown in the following table therefore are not comparable with the totals published for the months prior to January 1933. The index numbers of employment for class I railroads shown in table 1 have been adjusted to allow for this revision and furnish a monthly indicator of the trend of employment from January 1923 to the latest month available. In these tabulations data for the occupational group reported as "executives, officials, and staff assistants" are omitted.

TABLE 2.—EMPLOYMENT ON CLASS I STEAM RAILROADS, OCTOBER TO DECEMBER 1933, AND PAY ROLLS FOR OCTOBER AND NOVEMBER 1933

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups. Employment figures for December 1933 are available by group totals only at this time.]

Occupations	Number of employees at middle of month			Total earnings	
	October 1933	November 1933	December 1933	October 1933	November 1933
Professional, clerical, and general	164,695	163,824	163,349	$22,116,298	$21,845,527
Clerks	86,735	85,929	.....	11,036,555	10,819,823
Stenographers and typists	15,395	15,391	.....	1,852,434	1,841,677
Maintenance of way and structures	218,316	198,455	182,300	17,053,238	14,938,961
Laborers, extra gang and work train	22,968	16,598	.....	1,270,357	880,094
Laborers, track and roadway section	117,748	105,745	.....	6,755,780	5,488,164
Maintenance of equipment and stores	275,673	275,664	267,334	31,041,415	29,149,838
Carmen	57,325	56,056	.....	7,234,292	6,686,306
Electrical workers	8,177	8,180	.....	1,114,125	1,066,875
Machinists	38,409	38,673	.....	5,179,999	4,847,188
Skilled trades helpers	61,392	61,314	.....	5,817,428	5,356,784
Laborers (shop, engine houses, power plants, and stores)	21,191	21,224	.....	1,616,763	1,569,571
Common laborers (shop, engine houses, power plants, and stores)	18,920	18,615	.....	1,155,680	1,060,262
Transportation, other than train, engine and yard	126,924	123,644	123,149	14,007,947	13,428,694
Station agents	24,243	24,134	.....	3,384,659	3,320,968
Telegraphers, telephoners, and towermen	15,046	14,868	.....	2,086,106	2,009,525
Truckers (stations, warehouses, and platforms)	18,532	17,362	.....	1,390,749	1,257,202
Crossings and bridge flagmen and gatemen	17,192	17,095	.....	1,130,044	1,123,319
Transportation, yardmaster, switch tenders, and hostlers	12,394	12,247	12,091	2,079,553	2,027,037
Transportation, train and engine	214,753	211,600	204,052	35,682,668	33,080,550
Road conductors	23,502	22,969	.....	5,044,660	4,679,536
Road brakemen and flagmen	49,495	48,751	.....	6,926,753	6,380,106
Yard brakemen and yard helpers	36,956	36,713	.....	4,764,936	4,436,272
Road engineers and motormen	28,794	28,168	.....	6,774,011	6,259,587
Road firemen and helpers	31,561	31,178	.....	4,905,379	4,520,951
All employees	1,012,755	985,434	952,275	121,981,119	114,470,607

Employment Created by the Public Works Fund

THE $3,300,000,000 Public Works Fund was voted by Congress to create employment throughout the United States. It is the duty of the Bureau of Labor Statistics to publish each month the number of wage earners, the amounts of pay rolls, and the number of man-hours worked by persons employed from this fund.

Allotments for construction projects awarded by the Public Works Administration are divided into two groups—first, Federal allotments, and second, non-Federal allotments.

Projects to be built from Federal allotments are financed wholly by public-works funds. They are built either by force account (that is the Federal department which has charge of the work hires the laborers directly) or contracts are awarded to commercial firms by the Federal departments. They include such types of construction as post-office buildings; Federal courthouses; naval vessel; river, harbor, and flood-control projects; reclamation projects; and forestry service. They are supervised entirely by representatives of the Federal Government. Whenever a contract is awarded by one of the

Federal agencies the name and address of the contractor, type of project, and the amount of the contract is at once furnished the Bureau of Labor Statistics. A copy of the Bureau's form BLS 742 is then sent to each contractor asking for the number of wage earners employed, the amounts of pay rolls, and the number of man-hours worked, as well as the total amount of expenditures for materials for all pay-roll periods ending between the 15th of the past month and the 15th of the current month. The primary contractor also furnishes the names and addresses of the subcontractors. The Bureau in turn mails its questionnaires to each subcontractor. For work done under force account the Federal agency doing the work supplies the Bureau each month with the same information as is obtained from the contractors.

Information concerning non-Federal projects is obtained from the State engineers of the Public Works Administration. For the most part non-Federal projects are confined to building construction (such as school buildings, city and county buildings, housing projects, etc.), street and road paving, and water and sewerage plants. The Public Works Administration makes a direct grant of 30 percent of the total cost of non-Federal work, and in many cases will loan the remaining 70 percent.

Table 1 shows, by types of project, employment, pay rolls, and man-hours worked during December 1933 on projects financed from public works funds.

TABLE 1.—EMPLOYMENT, PAY ROLLS, AND MAN-HOURS WORKED DURING DECEMBER 1933 ON PROJECTS FINANCED FROM PUBLIC WORKS FUNDS, BY TYPE OF PROJECT

Type of project	Number of wage earners employed	Amount of pay roll	Number of man-hours worked	Average earnings per hour	Average number of hours worked in month	Value of materials purchased
Building construction	17,816	$893,326	1,288,996	$0.693	72.4	$2,105,737
Public roads	152,144	8,533,300	(1)	(1)	(1)	(1)
River, harbor, and flood control	48,270	2,462,384	4,812,722	.512	99.7	4,122,958
Streets and roads [2]	7,682	324,377	571,172	.568	74.4	434,258
Naval vessels	4,060	431,055	562,798	.766	138.6	2,315,984
Reclamation	2,681	210,086	347,831	.604	129.7	530,909
Forestry	21,194	1,250,616	2,104,462	.594	99.3	746,912
Water and sewerage	6,096	302,972	495,724	.611	81.3	1,404,656
Miscellaneous	8,047	612,497	1,024,486	.598	127.3	[3] 1,615,334
Total	267,990	15,020,613	[4] 11,208,191	[4] .579	[4] 96.8	[4] 13,276,748

[1] Data not available.
[2] Other than those reported by the Bureau of Public Roads.
[3] Includes $1,133,578 worth of material which cannot be charged to any specific type of project.
[4] Excluding data for Bureau of Public Roads.

There were 267,990 employees directly engaged in construction projects financed by public works funds during the month ending December 15, 1933. These figures exclude all clerks and office workers.

More than half of the total employment under public-works construction projects were engaged in building roads under the direction of the Bureau of Public Roads of the Department of Agriculture. Nearly 50,000 men were working on river, harbor, and flood-control projects, and over 20,000 in forestry work. Building construction employed nearly 18,000 workers.

The pay rolls for workers on all types of projects amounted to more than $15,000,000. Workers on public roads received over $8,500,000; workers on river, harbor, and flood-control projects nearly $2,500,000; and forestry workers over $1,200,000. On no other type of construction projects were the workers paid as much as $1,000,000.

Data concerning man-hours were not obtained from the Bureau of Public Roads. Excluding workers on public roads, there were 115,846 employees on public-works construction projects. The average hourly earnings of these employees for the month of December was approximately 58 cents. Workers engaged on naval vessels received the highest hourly pay, earning nearly 77 cents per hour. The next highest hourly earnings were received by workers on building construction, where the rate paid was nearly 70 cents per hour. Workers on reclamation projects and water and sewerage systems received over 60 cents per hour. In no other case was the rate of pay less than 51 cents per hour.

The average hours worked during the month (excluding public-roads projects) was 96.8. Workers constructing naval vessels put in 139 hours per month, those on reclamation projects 130 hours per month, and those on miscellaneous projects 127 per month. No other type of work averaged as much as 100 hours per month.

Expenditures for materials during the month totaled over $13,000,000. Contractors on river, harbor, and flood-control work spent approximately 30 percent of this total.

Table 2 shows employment, pay rolls, and man-hours worked during December on projects financed from public works funds, by geographic divisions.

TABLE 2.—EMPLOYMENT, PAY ROLLS, AND MAN-HOURS WORKED DURING DECEMBER 1933 ON PROJECTS FINANCED FROM PUBLIC WORKS FUNDS, BY GEOGRAPHIC DIVISION

Geographic division	Number of wage earners employed on—		Amount of pay roll on—		Number of man-hours worked [1]	Average earnings per hour [1]	Average number of hours worked in month [1]	Value of materials purchased
	Public roads	Projects other than public roads	Public roads	Projects other than public roads				
New England	5,422	5,519	$337,709	$439,555	650,117	$0.676	117.8	$713,460
Middle Atlantic	23,406	6,013	1,273,874	451,420	657,888	.686	109.4	1,440,556
East North Central	12,133	10,179	877,235	585,038	915,997	.639	90.0	1,504,763
West North Central	28,893	18,146	1,389,927	819,060	1,507,680	.543	83.1	1,437,540
South Atlantic	16,983	13,948	704,274	869,226	1,440,016	.604	103.2	1,597,592
East South Central	10,321	19,383	358,752	1,005,475	2,111,532	.476	109.0	1,959,186
West South Central	27,297	14,656	1,258,616	698,933	1,380,816	.506	94.2	1,944,061
Mountain	20,587	11,301	1,724,379	545,741	941,092	.580	83.3	243,703
Pacific	7,102	15,323	608,534	968,540	1,351,033	.717	88.2	1,215,711
Total continental United States	152,144	[2] 114,516	8,533,300	[2] 6,389,386	[2] 10,963,581	[2] .583	[2] 95.7	[3] 13,190,394
Outside continental United States	(1)	1,330	(1)	97,927	244,610	.400	183.9	86,354
Grand total	152,144	115,846	8,533,300	6,487,313	11,208,191	.579	96.8	13,276,748

[1] Excluding data for public roads which are not available.
[2] Including data for 48 wage earners which cannot be charged to any specific geographic division.
[3] Includes $1,133,578 worth of material which cannot be charged to any specific geographic division.

Of the 267,990 wage earners paid from public works funds, more than 47,000 were working in the West North Central States during December. Nearly 42,000 were working in the West South Central States, and more than 30,000 each in the South Atlantic and Mountain States. Fewer workers were employed in the New England States than in any other geographic division.

Pay rolls reached a total of over $2,000,000 in the West North Central States, the West South Central States, and the Mountain States. New England was the only geographic division having a pay roll of less than $1,000,000.

Since data on man-hours were not available for public-roads work, the average earnings per hour as shown in the tables are for projects other than those under the supervision of the Bureau of Public Roads.

The Pacific Division had the highest hourly rate, 72 cents. Workers in the New England, Middle Atlantic, East North Central, and South Atlantic divisions averaged 60 cents per hour or more. The lowest hourly rate, 48 cents, was shown in the East South Central States.

Material orders placed by contractors in the East South Central and the West South Central States reached a higher total than any other geographic division.

Table 3 shows expenditures for materials during the month ending December 15, 1933, by types of material.

TABLE 3.—MATERIALS PURCHASED DURING MONTH ENDING DEC. 15, 1933, FOR PUBLIC-WORKS PROJECTS, BY TYPE OF MATERIAL

Type of material	Value of materials purchased [1]
Auto trucks	$97,747
Cast-iron pipe and fittings	332,981
Cement	361,635
Clay products	254,685
Concrete products	703,572
Cordage and twine	10,412
Crushed stone	40,880
Doors, shutters, and window sash and frames, molding, and trim, metal	66,527
Electrical machinery and supplies	238,523
Explosives	40,388
Firearms	301,390
Forgings, iron and steel, not made in plants operated in connection with steel works or rolling mills	204,024
Foundry and machine-shop products, not elsewhere classified	929,827
Glass	18,254
Hardware, miscellaneous	128,229
Instruments, professional and scientific	39,280
Lighting equipment	36,079
Lumber and timber products	1,671,239
Machine tools	318,111
Marble, granite, slate, and other stone products	1,713,412
Nonferrous-metal alloys; nonferrous-metal products, except aluminum, not elsewhere classified	32,105
Paints and varnishes	30,772
Paving materials and mixtures	135,289
Planing-mill products	190,076
Plumbing supplies	100,437
Pumps and pumping equipment	305,809
Roofing, built-up and roll; asphalt shingles; roof coatings other than paint	39,261
Sand and gravel	313,009
Sheet-metal work	31,712
Steam and hot-water heating apparatus	229,966
Steel-works and rolling-mill products, including structural and ornamental metal work	3,301,471
Tools, other than machine tools	15,690
Wall plaster, wall board, insulating board, and floor composition	14,935
Wire, drawn from purchased rods	245,252
Wire work not elsewhere classified	43,537
Other	730,232
Total	13,276,748

[1] Excluding material purchased by Bureau of Public Roads.

During the month ending December 15, 1933, expenditures for materials by contractors on public-works projects, other than those working under the jurisdiction of the Bureau of Public Roads, totaled over $13,000,000. Expenditures for steel products totaled over $3,000,000; expenditures for stone products, and for lumber and timber products totaled over $1,000,000.

It is estimated that the fabrication of materials purchased during this month will create approximately 40,000 man-months of labor.

Table 4 shows data concerning employment, pay rolls, and man-hours worked during each of the three months for which employment has been created by projects financed by public works funds.

TABLE 4.—EMPLOYMENT, PAY ROLLS, AND MAN-HOURS WORKED DURING OCTOBER, NOVEMBER, AND DECEMBER 1933 ON PROJECTS FINANCED FROM PUBLIC WORKS FUNDS

Item	1933		
	October	November	December
Number of wage earners employed	120,555	251,851	267,990
Amount of pay roll	[1] $7,223,371	$14,172,544	$15,020,613
Number of man-hours worked [2]	2,488,284	9,110,316	11,208,191
Average earnings per hour [2]	$0.634	$0.583	$0.579
Average number of hours worked in month [2]	95.0	87.8	96.8
Value of materials purchased [2]	$10,457,231	$11,615,580	$13,276,748

[1] Includes estimated pay roll for Bureau of Public Roads.
[2] Excluding data of Bureau of Public Roads.

In October there were slightly more than 120,000 employees working on public works projects. This number was more than doubled during November, while December showed an increase of approximately 16,000 as compared with the previous month.

Pay rolls were not available for public road work during October. The Bureau estimated the October pay roll at $5,646,000. Pay rolls for other types of construction totaled slightly over $1,500,000. During November and December total pay roll figures are available. Disbursements for this purpose totaled over $14,000,000 in November and more than $15,000,000 in December.

Materials purchases for the 3 months entailed an expenditure of more than $35,000,000.

Civil Works Administration

THE Public Works Administration, early in November, made an allotment of $400,000,000 to the Civil Works Administration. This money was to be used in providing jobs during the winter to people who were out of work. The greater part of the civil works employees were taken from the relief rolls throughout the United States. The people from the civil works rolls have now been given employment on needed projects and are entirely self supporting.

It is some time after a contract is awarded before the maximum employment is reached on the type of projects included under the regular Public Works Administration. The Civil Works Administration is giving jobs to people to bridge these gaps. Employees from the civil works rolls are engaged at the present in repairing buildings and bridges, in street and road work, working on slum clearance projects, landscaping, and mosquito eradication.

Table 5 shows the number of civil works employees on the pay rolls for weeks ending December 2, 1933, and January 18, 1934, as well as the pay roll for the week ending January 18, 1934.

TABLE 5.—CIVIL WORKS EMPLOYEES DECEMBER 2, 1933, AND JANUARY 18, 1934

Geographic division	Number		Pay rolls, week ending Jan. 18, 1934
	Dec. 2, 1933	Jan. 18, 1934	
New England	49,539	232,258	$3,762,410
Middle Atlantic	208,089	723,480	11,394,489
East North Central	313,023	865,322	15,652,585
West North Central	118,234	460,446	7,103,739
South Atlantic	291,481	532,852	6,898,762
East South Central	94,778	329,463	3,709,471
West South Central	302,499	512,892	5,763,530
Mountain	46,930	134,681	2,567,669
Pacific	99,394	248,080	4,493,038
Total	1,523,967	4,039,474	61,345,693
Percent of change		+165.1	

During the week ending January 18, 1934, over 4,000,000 employees drew pay for work on civil-works projects. This is an increase of nearly 2,500,000 or 165 percent as compared with December 2. These employees were paid over $61,000,000 for work performed during the week ending January 18, 1934.

The number of employees shown in the above table are those in the continental United States who drew pay during the week ending January 18, 1934. It does not represent the total number of people on public-works pay rolls for two reasons. In some localities the stagger system is used. That is, work is provided for a definite number of employees, and since it is impossible for the employers to provide jobs for all these employees at one time, one half are given jobs for one week and the other half the following week. This means that in some localities twice as many persons are given jobs as would draw pay for a given week. Weather conditions also affect employment, as most of the jobs are outside work and may be "rained out" for an entire week, therefore no pay would be drawn for that period.

No data are shown for localities outside the continental United States, although many people are doing work in outlying territories.

Emergency Conservation Work

EMPLOYEES on the rolls of the Emergency Conservation Work are now paid by allotments made from Public Works Fund.

Table 6 shows the employment and pay rolls in the Emergency Conservation Work during the months of November and December 1933.

TABLE 6.—EMPLOYMENT AND PAY ROLLS IN THE EMERGENCY CONSERVATION WORK, NOVEMBER AND DECEMBER 1933

Group	Number		Pay rolls	
	November	December	November	December
Enrolled personnel	296,026	288,855	$9,244,887	$9,020,943
Reserve officers, line	3,494	3,588	783,682	848,373
Reserve officers, medical	1,085	920		
Supervisory and technical	14,054	13,168	1,657,575	1,362,724
Carpenters and laborers	26,054	11,343	2,400,304	1,215,637
Total	340,713	317,874	14,086,448	12,447,677

There was a decrease of more than 20,000 people engaged in Emergency Conservation Work comparing December with November. This decrease was largely caused by the completion of the erection of cabins for winter quarters of the Civilian Conservation Corps, although there was a slight falling off in both the enlisted personnel and supervisory and technical force. There was an increase in line Reserve officers but a decrease in medical Reserve officers.

Information concerning employment and pay rolls in the Emergency Conservation Work is collected by the Bureau of Labor Statistics from the War Department, the Department of Agriculture, and the Department of the Interior.

The pay of the enlisted personnel is $30 per month, except that 5 percent of the personnel of each company are paid $45 and an additional 8 percent are paid $36 per month. The pay roll of this branch of the service is figured on this basis.

The carpenters and laborers shown in the above table are constructing barracks to be used as winter quarters by the Civilian Conservation Corps. This work is practically finished. However, the construction of recreation buildings in a number of the camps has been started which will engage the services of a number of building tradesmen during the months of January and February.

Table 7 shows the monthly totals of the employees and pay rolls of the Emergency Conservation Work from the inception of the work in May to December 1933.

TABLE 7.—MONTHLY TOTALS OF EMPLOYEES AND PAY ROLLS IN THE EMERGENCY CONSERVATION WORK FROM MAY 1933 TO DECEMBER 1933

Months	Employees	Pay roll	Months	Employees	Pay roll
May	191,113	$6,353,641	September	240,901	$9,487,755
June	281,861	9,663,701	October	269,644	10,232,875
July	314,142	11,223,542	November	340,713	14,086,448
August	305,039	11,333,318	December	317,874	12,447,677

Employment on Public Roads (Other Than Public Works)

THE following table shows the number of employees, exclusive of those paid from Public Works Fund, engaged in building and maintaining public roads, State and Federal, during the months of November and December, by geographic divisions.

TABLE 1.—NUMBER OF EMPLOYEES ENGAGED IN THE CONSTRUCTION AND MAINTENANCE OF PUBLIC ROADS, STATE AND FEDERAL, DURING NOVEMBER AND DECEMBER 1933, BY GEOGRAPHIC DIVISIONS [1]

Geographic division	Federal				State			
	Number		Pay rolls		Number		Pay rolls	
	November	December	November	December	November	December	November	December
New England	1,769	855	$105,309	$51,670	24,100	14,213	$2,160,491	$1,316,448
Middle Atlantic	3,441	1,619	255,313	113,030	45,729	32,632	3,924,922	1,677,643
East North Central	6,631	2,886	379,639	163,161	48,227	34,849	2,814,909	1,867,178
West North Central	2,555	1,854	158,030	104,243	33,462	29,600	1,803,261	1,567,817
South Atlantic	6,017	3,537	233,783	159,457	40,655	34,481	1,444,317	1,238,904
East South Central	4,288	3,311	173,296	127,665	12,142	13,040	594,930	514,117
West South Central	7,105	4,839	308,943	223,565	11,503	12,034	820,761	741,796
Mountain	3,650	1,525	286,126	117,174	[2] 9,182	8,167	[2] 732,326	538,683
Pacific	2,656	919	224,126	74,761	[2] 9,144	8,607	[2] 897,887	765,774
Total	38,112	21,345	2,124,565	1,134,726	[2] 234,144	187,623	15,193,804	10,228,360
Percent of change		−44.0		−46.6		−19.9		−32.7

[1] Excluding employment furnished by projects financed from Public Works Fund.
[2] Revised.

The number of employees engaged in Federal road building financed under the old State-aid law decreased 44 percent comparing December with November. It should be borne in mind that practically all of the new contracts awarded for road building are now financed from Public Works Fund.

There was an increase in the number of employees working on Federal road work financed from Public Works Fund comparing these two months. (See table 1, p. 438.) Pay rolls for Federal road projects other than public works, decreased 46.6 percent in December as compared with the previous month. There was a decrease of 19.9 percent in the number of employees engaged in road work financed by State governments. December pay rolls for these men decreased 32.7 percent as compared with November.

Seventy-five and one tenth percent of the workers engaged on State roads were working on maintenance and only 24.9 percent in building new roads.

RETAIL PRICES

THE Bureau of Labor Statistics of the United States Department of Labor collects, compiles, and issues retail prices for several groups of commodities. From time to time the work has been expanded to include additional cities and articles. The Bureau now covers 51 localities well scattered throughout the continental United States and also the Territory of Hawaii.

Retail prices of food were collected on the 15th of each month from January 1913 to July 1933, inclusive. In order that current information may be available oftener, the Bureau began in August 1933 the collecting of these prices every 2 weeks. Retail prices of 45 of the principal articles are being collected every other Tuesday. Beginning with the collection for January 2, 1934, prices will be secured on 33 additional food items.

Retail prices of coal were collected on January 15 and July 15 for the years 1913 through 1919 from the cities covered in the retail food study. Beginning with June 1920, prices have been collected on the 15th of each month. No change has been made in the dates for the collection of retail prices of coal.

Retail prices of manufactured and natural gas and residential schedules of rates for electricity are secured in June and December of each year in connection with the cost of living survey. Detailed information is shown in this section (pp. 458–463).

Retail Prices of Food in December 1933

RETAIL prices of food were collected by the Bureau for two periods during the month, namely, December 5 and 19. Prices were received from the same dealers and the same cities were covered as have been included in the Bureau's reports for former periods. For August 29, however, a representative number of reports was not received from some of the cities, and average prices for the United States as a whole for this date are not strictly comparable with average prices shown for other dates. The index numbers, however, have been adjusted by using the percent of change in identical cities and are, therefore, comparable with indexes of other periods.

Three commodities have been added to the Bureau's list of food items beginning with August 29. These items are rye bread, canned peaches, and canned pears. Only average prices can be shown for these articles as corresponding prices for the year 1913 are not available for the purpose in index numbers.

In addition to the information for December 1933, there are shown in this report average prices and index numbers for the year 1933 for food in the United States (51 cities combined).

Data for the tabular statements shown in this report are compiled from simple averages of the actual selling prices as reported to the Bureau by retail dealers in the 51 cities. Comparable information for months and years, 1913 to 1928, inclusive, is shown in Bulletins Nos. 396 and 495; and by months and years, 1929 to 1932, inclusive, in the March, April, and June 1933 issues of this publication.

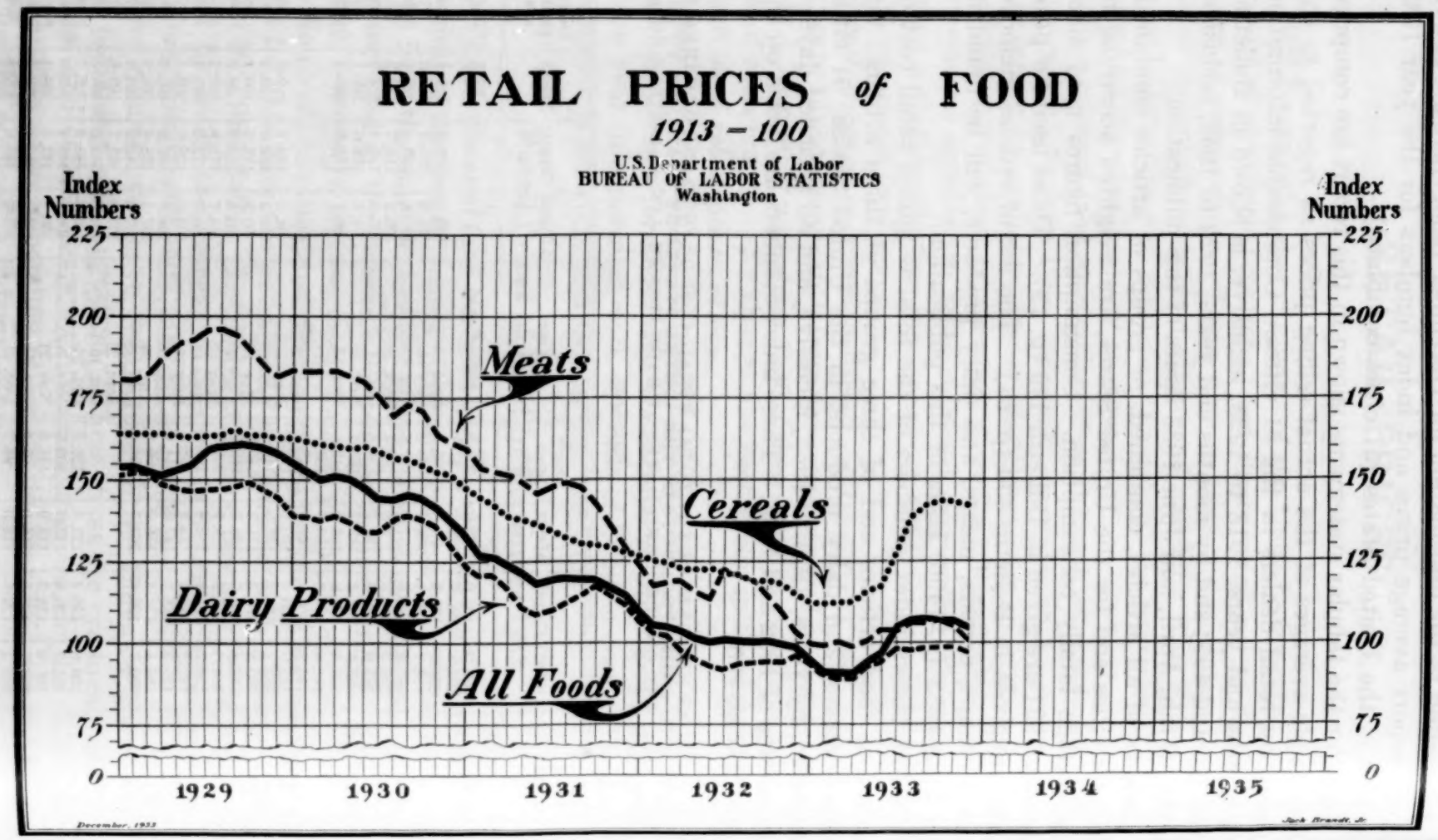
Indexes of all articles, combined, or groups of articles combined, both for cities and for the United States, are weighted according to the average family consumption. Consumption figures used since January 1921 are given in Bulletin 495 (p. 13). Those used for prior dates are given in Bulletin 300 (p. 61). The list of articles included in the groups, cereals, meats, and dairy products, will be found in the June 1932 (p. 1496) issue of this publication.

Table 1 shows index numbers of the total weighted retail cost of important food articles and of three groups of these articles; viz, cereals, meats, and dairy products, in the United States, 51 cities combined, by years, 1913 to 1933, inclusive, and on specified days of the months of 1932 and 1933. These index numbers are based on the year 1913 as 100.

TABLE 1.—INDEX NUMBERS OF THE TOTAL RETAIL COST OF FOOD AND OF CEREALS, MEATS, AND DAIRY PRODUCTS IN THE UNITED STATES BY YEARS, 1913 TO 1933, INCLUSIVE, AND ON SPECIFIED DATES OF EACH MONTH, JAN. 15, 1932, TO DEC. 19, 1933, INCLUSIVE

[1913=100]

Year	All food	Cereals	Meats	Dairy products
1913	100.0	100.0	100.0	100.0
1914	102.4	106.7	103.4	97.1
1915	101.3	121.6	99.6	96.1
1916	113.7	126.8	108.2	103.2
1917	146.4	186.5	137.0	127.6
1918	168.3	194.3	172.8	153.4
1919	185.9	198.0	184.2	176.6
1920	203.4	232.1	185.7	185.1
1921	153.3	179.8	158.1	149.5
1922	141.6	159.3	150.3	135.9
1923	146.2	156.9	149.0	147.6
1924	145.9	160.4	150.2	142.8
1925	157.4	176.2	163.0	147.1
1926	160.6	175.5	171.3	145.5
1927	155.4	170.7	169.9	148.7
1928	154.3	167.2	179.2	150.0
1929	156.7	164.1	188.4	148.6
1930	147.1	158.0	175.8	136.5
1931	121.3	135.9	147.0	114.6
1932	102.1	121.1	116.0	96.6
1933	99.7	126.6	102.7	94.6
1932				
Jan. 15	109.3	126.4	123.4	106.5
Feb. 15	105.3	125.0	117.3	102.9
Mar. 18	105.0	124.3	118.9	101.9
Apr. 15	103.7	122.9	118.6	97.4
May 15	101.3	122.6	115.3	94.3
1932—Contd.				
June 15	100.1	122.5	113.4	92.6
July 15	101.0	121.2	122.6	91.4
Aug. 15	100.8	120.4	120.1	93.1
Sept. 15	100.3	119.2	119.2	93.5
Oct. 15	100.4	119.0	114.6	93.8
Nov. 15	99.4	118.0	109.1	93.9
Dec. 15	98.7	114.8	103.2	95.9
1933				
Jan. 15	94.8	112.3	99.9	93.3
Feb. 15	90.9	112.0	99.0	90.3
Mar. 15	90.5	112.3	100.1	88.3
Apr. 15	90.4	112.8	98.8	88.7
May 15	93.7	115.8	100.1	92.2
June 15	96.7	117.2	103.7	93.5
July 15	104.8	128.0	103.5	97.7
Aug. 15	106.7	137.8	105.7	96.5
Aug. 29	107.1	138.8	106.9	97.5
Sept. 12	107.0	140.2	104.4	97.8
Sept. 26	107.4	142.7	107.8	97.9
Oct. 10	107.3	143.8	107.3	98.6
Oct. 24	106.6	143.3	106.3	98.4
Nov. 7	106.7	143.4	105.9	98.6
Nov. 21	106.8	143.5	104.1	98.5
Dec. 5	105.5	142.5	101.2	98.7
Dec. 19	103.9	142.0	100.4	94.7


RETAIL PRICES of FOOD
1913 – 100
U.S. Department of Labor
BUREAU OF LABOR STATISTICS
Washington
Index Numbers
225
200
175
150
125
100
75
0
Meats
Cereals
Dairy Products
All Foods
1929
1930
1931
1932
1933
1934
1935
December, 1933

The chart on page 448 shows the trend in the retail cost of all food and of the classified groups, cereals, meats, and dairy products in the United States (51 cities) from January 15, 1929, to December 19, 1933, inclusive.

Table 2 shows index numbers of the total weighted retail cost of important food articles and of cereals, meats, and dairy products in the United States based on the year 1913 as 100, and changes on December 19, 1933, compared with December 15, 1932, and November 21 and December 5, 1933.

TABLE 2.—INDEX NUMBERS OF THE TOTAL WEIGHTED RETAIL COST OF FOOD AND OF CEREALS, MEATS, AND DAIRY PRODUCTS FOR THE UNITED STATES ON SPECIFIED DATES, AND PERCENT OF CHANGE, DEC. 19, 1933, COMPARED WITH DEC. 15, 1932, AND NOV. 21 AND DEC. 5, 1933

Article	Index (1913=100)					Percent of change Dec. 19, 1933, compared with—		
	Dec. 16, 1932	1933						
		Nov. 7	Nov. 21	Dec. 5	Dec. 19	Dec. 15, 1932	Nov. 21, 1933	Dec. 5, 1933
All food	98.7	106.7	106.8	105.5	103.9	+5.3	−2.7	−1.5
Cereals	114.8	143.4	143.5	142.5	142.0	+23.7	−1.0	−.4
Meats	103.2	105.9	104.1	101.2	100.4	−2.8	−3.6	−.8
Dairy products	95.9	98.6	98.5	98.7	94.7	−1.3	−3.9	−4.1

Table 3 shows the average retail prices of principal food articles for the United States on specified dates of each month of 1933 and the average for the year 1933.

TABLE 3.—AVERAGE RETAIL PRICES OF FOOD FOR THE UNITED STATES ON SPECIFIED DATES OF 1933

Article	Jan. 15	Feb. 15	Mar. 15	Apr. 15	May 15	June 15	July 15	Aug. 15	Aug. 29	Sept. 12	Sept. 26	Oct. 10	Oct. 24	Nov. 7	Nov. 21	Dec. 5	Dec. 19	Year average
	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.	Ct.
Sirloin steak, pound	28.9	28.5	28.2	28.0	28.4	29.7	29.8	30.2	29.8	30.1	30.1	29.9	29.5	29.3	28.8	28.2	27.8	29.0
Round steak, do	24.9	24.2	24.3	24.2	24.6	25.8	26.1	26.5	26.5	26.2	26.1	25.9	25.8	25.5	25.0	24.3	24.2	25.2
Rib roast, do	21.2	20.9	20.8	20.6	20.8	21.3	20.9	21.4	21.2	20.9	21.0	21.0	20.8	20.8	20.4	20.3	19.9	20.9
Chuck roast, do	15.3	14.9	15.0	15.0	15.1	15.4	15.2	15.5	15.4	15.3	15.4	15.3	15.3	15.3	15.1	15.0	14.8	15.2
Plate beef, do	10.4	10.0	10.0	10.0	10.0	10.0	9.6	9.9	10.0	9.9	9.9	10.1	10.1	10.0	9.9	9.8	9.7	10.0
Pork chops, do	16.5	17.6	19.0	17.8	18.0	18.5	18.2	19.7	21.2	21.7	23.8	23.7	23.1	23.2	22.2	19.7	19.8	19.6
Bacon, sliced, do	21.4	20.8	21.0	20.9	21.3	22.5	23.3	23.2	23.5	23.1	23.2	23.3	23.3	23.3	23.3	23.1	23.1	22.3
Ham, sliced, do	28.9	28.5	29.1	28.8	29.6	31.5	32.1	32.7	33.1	32.4	32.5	32.3	32.0	32.1	32.0	31.7	31.3	30.8
Lamb, leg of, do	21.7	21.7	21.6	21.3	21.4	22.7	22.3	22.4	23.1	22.3	22.2	21.9	21.5	21.3	21.2	21.0	20.7	21.8
Hens, do	21.4	21.3	21.2	21.4	21.5	21.4	21.0	20.7	20.3	20.4	20.9	20.5	20.5	20.3	20.0	19.8	19.9	20.9
Salmon, red, canned, 16-oz. can	19.4	19.0	18.5	18.3	18.6	19.0	19.4	19.9	20.3	20.4	20.6	20.8	20.7	20.7	20.9	20.8	20.8	19.6
Milk, fresh, quart	10.4	10.3	10.1	10.1	10.0	10.2	10.4	10.9	10.9	11.0	11.0	11.1	11.1	11.1	11.1	11.2	11.2	10.6
Milk, evaporated, 14½-oz. can	6.6	6.6	5.9	5.8	6.5	6.7	6.8	6.9	6.8	6.9	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.6
Butter, pound	27.1	24.8	24.8	25.4	28.2	28.1	31.0	27.2	27.9	27.9	28.1	28.3	28.2	28.4	28.4	28.0	24.1	27.3
Margarine, do	13.4	12.7	12.4	12.3	12.8	13.0	13.3	13.7	13.6	13.6	13.5	13.4	13.3	13.1	12.8	12.6	12.5	13.0
Cheese, do	22.3	21.3	20.9	21.0	22.3	23.1	23.6	23.6	23.2	23.5	23.5	23.4	23.2	23.1	22.8	22.9	22.3	22.5
Lard, do	8.1	7.7	7.9	7.9	8.9	9.7	10.1	10.0	9.8	9.6	9.6	9.6	9.5	9.6	9.8	9.6	9.4	9.0
Vegetable lard substitute, do	18.7	18.5	18.5	18.4	18.5	18.5	18.7	19.0	19.0	19.0	19.0	19.0	19.0	19.1	19.1	19.0	19.0	18.7
Eggs, strictly fresh, dozen	32.4	21.4	19.8	18.4	20.3	20.0	24.3	25.3	25.6	28.3	30.3	32.5	33.5	34.6	36.1	35.1	32.1	26.1
Bread, white, wheat, pound	6.4	6.4	6.4	6.4	6.5	6.6	7.2	7.6	7.6	7.7	7.9	8.0	8.0	8.0	8.0	7.9	7.9	7.1
Bread, rye, do									8.4	8.5	8.6	8.6	8.6	8.6	8.6	8.6	8.6	
Flour, do	2.9	2.9	3.0	3.1	3.4	3.4	4.0	4.8	4.9	4.9	4.9	4.9	4.8	4.8	4.8	4.8	4.7	3.9
Corn meal, do	3.5	3.4	3.4	3.4	3.5	3.6	3.7	3.8	3.8	4.0	4.0	3.9	3.9	3.9	4.0	4.0	4.0	3.7
Rolled oats, do	5.7	5.6	5.5	5.6	5.6	5.6	5.9	6.2	6.4	6.4	6.5	6.5	6.5	6.5	6.5	6.6	6.6	6.0
Corn flakes, 8-oz. pkg.	8.5	8.6	8.3	8.3	8.2	8.2	8.3	8.5	8.6	8.7	8.7	8.7	8.8	8.9	8.9	8.9	8.9	8.5
Wheat cereal, 28-oz. pkg.	22.4	22.3	22.2	22.3	22.3	22.4	22.8	23.4	23.8	23.7	23.7	23.9	24.0	24.0	24.0	24.0	24.1	23.0
Macaroni, pound	14.7	14.6	14.5	14.4	14.4	14.4	14.9	15.5	15.6	15.6	15.7	15.8	15.8	15.9	15.8	15.8	15.8	15.0
Rice, do	5.9	5.8	5.7	5.7	5.8	6.0	6.2	6.4	6.5	6.6	6.7	6.8	6.8	6.9	6.9	7.0	7.0	6.2
Beans, navy, do	4.3	4.1	4.1	4.4	5.1	5.3	5.5	6.0	6.1	6.3	6.3	6.2	6.0	6.0	6.0	5.9	5.9	5.3
Potatoes, do	1.5	1.5	1.6	1.6	1.7	2.3	3.6	3.5	3.3	3.1	2.8	2.5	2.3	2.3	2.3	2.2	2.3	2.3
Onions, do	2.7	2.6	2.8	3.2	3.9	4.6	4.8	4.3	4.1	3.9	3.7	3.5	3.4	3.4	3.4	3.5	3.8	3.6
Cabbage, do	2.9	3.1	3.5	4.0	5.2	4.6	4.8	4.5	4.0	3.6	3.5	3.3	3.2	3.2	3.6	3.9	4.3	3.9
Pork and beans, 16-oz. can	6.6	6.5	6.4	6.4	6.4	6.5	6.6	6.8	6.8	6.8	6.9	6.8	6.9	6.9	6.8	6.9	6.8	6.6
Corn, canned, no. 2 can	10.0	9.8	9.8	9.7	9.8	9.8	9.9	10.3	10.3	10.5	10.6	10.8	10.9	10.9	10.9	11.0	10.9	10.2
Peas, canned, do	12.6	12.6	12.5	12.7	12.7	12.8	12.8	13.0	13.1	13.3	13.3	13.5	13.5	13.6	13.6	13.6	13.6	13.0
Tomatoes, canned, do	8.6	8.6	8.5	8.5	8.7	9.0	9.1	9.4	9.4	9.6	9.8	9.8	9.9	9.9	9.8	9.8	9.9	9.1
Sugar, granulated, pound	5.1	5.0	5.0	5.1	5.3	5.4	5.5	5.6	5.7	5.7	5.7	5.7	5.7	5.6	5.6	5.6	5.5	5.4
Tea, do	67.2	66.1	65.2	64.8	64.4	63.5	64.1	64.5	65.8	66.0	66.4	66.8	66.9	67.0	66.6	66.9	67.6	65.6
Coffee, do	28.7	27.8	27.4	27.3	27.0	27.0	27.0	27.0	27.2	26.7	26.6	26.6	26.6	26.6	26.6	26.5	26.4	27.1
Prunes, do	8.9	8.9	8.8	8.8	9.0	9.2	9.4	9.8	10.1	10.1	10.3	10.4	10.6	10.6	10.6	10.7	10.7	9.6
Raisins, do	9.5	9.3	9.2	9.1	9.1	9.2	9.2	9.3	9.4	9.4	9.4	9.4	9.4	9.4	9.3	9.3	9.1	9.3
Bananas, dozen	23.0	22.7	22.0	22.7	22.4	23.6	24.8	24.0	24.5	25.1	25.4	24.6	24.7	24.0	24.0	24.5	24.8	23.7
Oranges, do	27.1	26.5	25.2	25.2	26.0	28.0	28.5	29.1	28.6	28.7	29.9	29.8	29.7	28.7	27.6	26.6	25.8	27.4
Peaches, no. 2½ can									16.9	17.0	17.1	17.1	17.2	17.3	17.4	17.4	17.4	
Pears, do									20.5	20.5	20.4	20.6	20.5	20.5	20.6	20.5	20.4	

In table 4 index numbers are given which show the changes in the retail prices of specified food articles, and in the weighted cost of all articles combined by years, for 1913, 1920, 1928, 1929, 1930, 1931, 1932, and 1933, and by months for 1932 and 1933. These index numbers are based on the average for the year 1913 as 100.

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920, 1928, 1929, 1930, 1931, 1932, AND 1933, AND BY MONTHS FOR 1932 AND 1933

[Average for year 1913=100]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef	Pork chops	Bacon	Ham	Lamb, leg of	Hens	Milk	Butter
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	207.9	209.9	187.6	183.0
1928	188.2	188.3	176.8	174.4	157.0	165.7	163.0	196.7	208.5	175.6	159.6	147.5
1929	196.9	199.1	185.4	186.9	172.7	175.7	161.1	204.1	212.2	186.4	160.7	143.9
1930	182.7	184.8	172.7	170.0	155.4	171.0	156.7	198.5	185.7	166.7	157.3	120.4
1931	155.1	154.3	146.0	134.4	118.2	138.6	134.8	170.6	156.1	145.5	138.2	92.4
1932	131.1	129.6	121.7	108.1	93.4	101.0	89.3	130.1	125.4	115.5	122.5	71.5
Jan. 15	137.4	135.0	129.8	115.6	101.7	99.5	101.5	139.8	127.5	131.0	129.2	84.3
Feb. 15	130.7	127.4	123.2	108.1	97.5	91.0	96.7	136.4	125.4	127.2	128.1	77.0
Mar. 15	129.9	127.8	123.2	108.1	95.9	102.4	95.2	136.1	131.7	128.2	127.0	77.0
Apr. 15	131.5	128.3	122.7	108.8	95.9	102.4	92.2	134.9	135.4	124.9	123.6	70.0
May 15	129.9	127.4	120.2	106.3	91.7	94.8	88.5	131.2	132.3	120.7	121.3	65.5
June 15	129.1	127.4	118.7	105.6	88.4	93.8	85.9	129.7	128.6	113.1	121.3	62.9
July 15	139.0	139.0	125.8	113.1	92.6	121.4	87.8	133.8	131.7	110.8	120.2	62.4
Aug. 15	137.4	138.1	124.2	112.5	92.6	111.0	88.5	132.7	127.0	108.5	118.0	70.0
Sept. 15	135.4	135.4	122.7	111.3	92.6	113.3	87.0	130.9	123.8	110.3	119.1	70.2
Oct. 15	130.3	129.6	119.7	108.1	93.4	102.4	85.9	126.4	116.9	108.5	120.2	69.7
Nov. 15	123.6	121.5	115.7	103.8	91.7	96.2	82.3	117.8	112.7	105.2	119.1	71.8
Dec. 15	117.7	115.7	111.6	98.8	88.4	83.8	80.0	112.6	111.1	99.5	116.9	77.8
1933	114.2	113.0	105.6	95.0	82.6	93.3	82.6	114.5	115.3	98.1	119.1	71.3
Jan. 15	113.8	111.7	107.1	95.6	86.0	78.6	79.3	107.4	114.8	100.5	116.9	70.8
Feb. 15	112.2	108.5	105.6	93.1	82.6	83.3	77.0	105.9	114.8	100.0	115.7	64.8
Mar. 15	111.0	109.0	105.1	93.8	82.6	90.5	77.8	108.2	114.3	99.5	113.5	64.8
Apr. 15	110.2	108.5	104.0	93.8	82.6	84.8	77.4	107.1	112.7	100.5	113.5	66.3
May 15	111.8	110.3	105.1	94.4	82.6	85.7	78.9	110.0	113.2	100.9	112.4	73.6
June 15	116.9	115.7	107.6	96.3	82.6	88.1	83.3	117.1	120.1	100.5	114.6	73.4
July 15	117.3	117.0	105.6	95.0	79.3	86.7	86.3	119.3	118.0	98.6	116.9	80.9
Aug. 15	118.9	118.8	108.1	96.9	81.8	93.8	85.9	121.6	118.5	97.2	122.5	71.3
Aug. 29	119.3	119.7	107.1	96.9	81.8	100.9	86.3	122.7	121.7	96.2	123.6	72.6
Sept. 12	118.5	117.5	105.6	95.6	81.8	103.3	85.6	120.4	118.0	95.8	123.6	72.8
Sept. 26	118.5	117.0	106.1	96.3	81.8	113.3	85.9	120.8	117.5	98.1	123.6	73.4
Oct. 10	117.7	116.1	106.1	95.6	83.5	112.9	86.3	120.1	115.9	96.2	124.7	73.9
Oct. 24	116.1	115.7	105.1	95.6	83.5	110.0	86.3	119.0	113.8	96.2	124.7	73.6
Nov. 7	115.4	114.3	105.1	95.6	82.6	110.5	86.3	119.3	112.7	95.3	124.7	74.2
Nov. 21	113.4	112.1	103.0	94.4	81.8	105.7	86.3	119.0	112.2	93.9	124.7	74.2
Dec. 5	111.0	109.0	102.5	93.8	81.0	93.8	85.6	117.8	111.1	93.0	125.8	73.1
Dec. 19	109.4	108.5	100.5	92.5	80.2	94.3	85.6	116.7	109.5	93.4	125.8	62.9

TABLE 4.—INDEX NUMBERS OF RETAIL PRICES OF PRINCIPAL ARTICLES OF FOOD BY YEARS, 1913, 1920, 1928, 1929, 1930, 1931, 1932, AND 1933, AND BY MONTHS FOR 1932 AND 1933—Continued

Year and month	Cheese	Lard	Eggs	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Tea	Coffee	All articles [1] (weighted)
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1920	188.2	186.7	197.4	205.4	245.5	216.7	200.0	370.6	352.7	134.7	157.7	203.4
1928	174.2	117.7	134.5	162.5	163.6	176.7	114.9	158.8	129.1	142.3	165.1	154.3
1929	171.9	115.8	142.0	160.7	154.5	176.7	111.5	188.2	120.0	142.6	164.8	156.7
1930	158.8	107.6	118.8	155.4	142.4	176.7	109.2	211.8	112.7	142.5	136.2	147.1
1931	127.1	84.2	91.9	135.7	109.1	153.3	94.3	135.3	103.6	138.6	113.4	121.3
1932	104.1	55.7	78.8	121.4	97.0	126.7	77.0	100.0	92.7	130.3	101.3	102.1
Jan. 15	115.4	63.9	85.8	126.8	100.0	133.3	85.1	100.0	98.2	136.2	104.4	109.3
Feb. 15	110.4	59.5	70.1	125.0	100.0	133.3	83.9	100.0	96.4	135.3	104.0	105.3
Mar. 15	107.7	57.6	61.2	125.0	97.0	130.0	81.6	100.0	94.5	134.7	103.4	105.0
Apr. 15	105.4	55.1	58.0	123.2	97.0	130.0	79.3	100.0	92.7	133.1	102.3	103.7
May 15	101.8	52.5	58.0	123.2	97.0	130.0	77.0	105.9	89.1	132.4	100.7	101.3
June 15	100.9	49.4	60.3	123.2	97.0	130.0	75.9	117.6	89.1	130.5	99.7	100.1
July 15	99.5	53.8	66.1	121.4	97.0	126.7	75.9	111.8	90.9	129.2	99.7	101.0
Aug. 15	102.3	56.3	77.7	121.4	93.9	130.0	74.7	100.0	92.7	128.9	99.3	100.8
Sept. 15	102.7	57.6	85.5	119.6	93.9	126.7	74.7	88.2	92.7	128.5	101.0	100.3
Oct. 15	102.3	57.0	100.3	119.6	93.9	123.3	73.6	88.2	92.7	125.9	101.7	100.4
Nov. 15	101.4	55.1	109.0	119.6	90.9	120.0	71.3	82.4	92.7	125.2	101.0	99.4
Dec. 15	101.4	51.3	115.7	117.9	87.9	116.7	69.0	88.2	92.7	124.6	99.7	98.7
1933	101.8	57.0	75.7	126.8	118.2	123.3	71.3	135.3	98.2	120.6	90.9	99.7
Jan. 15	100.9	51.3	93.9	114.3	87.9	116.7	67.8	88.2	92.7	123.5	96.3	94.8
Feb. 15	96.4	48.7	62.0	114.3	87.9	113.3	66.7	88.2	90.9	121.5	93.3	90.9
Mar. 15	94.6	50.0	57.4	114.3	90.9	113.3	65.5	94.1	90.9	119.9	91.9	90.5
Apr. 15	95.0	50.0	53.3	114.3	93.9	113.3	65.5	94.1	92.7	119.1	91.6	90.4
May 15	100.9	56.3	58.8	116.1	103.0	116.7	66.7	100.0	96.4	118.4	90.6	93.7
June 15	104.5	61.4	58.0	117.9	103.0	120.0	69.0	135.3	98.2	116.7	90.6	96.7
July 15	106.8	63.9	70.4	128.6	121.2	123.3	71.3	211.8	100.0	117.8	90.6	104.8
Aug. 15	106.8	63.3	73.3	135.7	145.5	126.7	73.6	205.9	101.8	118.6	90.6	106.7
Aug. 29	105.9	62.0	75.7	135.7	151.6	130.1	73.6	194.1	101.8	119.1	90.9	107.1
Sept. 12	106.3	60.8	82.0	137.5	148.5	133.3	75.9	182.4	103.6	121.3	89.6	107.0
Sept. 26	106.3	60.8	87.8	141.1	148.5	133.3	77.1	164.7	103.6	122.1	89.3	107.4
Oct. 10	105.9	60.8	94.2	142.9	148.5	130.0	78.2	147.1	103.6	122.8	89.3	107.3
Oct. 24	105.0	60.1	97.1	142.9	145.5	130.0	78.2	135.3	103.6	123.0	89.3	106.6
Nov. 7	104.5	60.8	100.3	142.9	145.5	130.0	79.3	135.3	101.8	123.2	89.3	106.7
Nov. 21	103.2	62.0	104.6	142.9	145.5	133.3	79.3	135.3	101.8	122.4	89.3	106.8
Dec. 5	103.6	60.8	101.7	141.1	145.5	133.3	80.5	129.4	101.8	123.0	88.9	105.5
Dec. 19	100.9	59.5	93.0	141.1	142.4	133.3	80.5	135.3	100.0	124.3	88.6	103.9

[1] 22 articles in 1913–20; 42 articles in 1921–32.

Table 5 shows index numbers of the weighted retail cost of food for the United States and 39 cities, based on the year 1913 as 100. The percent of change on December 19, 1933, compared with December 15, 1932, and November 21 and December 5, 1933, are also given for these cities and the United States and for 12 additional cities from which prices were not secured in 1913.

TABLE 5.—INDEX NUMBERS OF THE TOTAL WEIGHTED RETAIL COST OF FOOD BY CITIES AND FOR THE UNITED STATES ON SPECIFIED DATES, AND PERCENT OF CHANGE DEC. 19, 1933, COMPARED WITH DEC. 15, 1932, AND NOV. 21 AND DEC. 5, 1933

City	Index number (1913=100)					Percent of change Dec. 19, 1933, compared with—		
	1932	1933				1932	1933	
	Dec. 15	Nov. 7	Nov. 21	Dec. 5	Dec. 19	Dec. 15	Nov. 21	Dec. 5
United States	98.7	106.7	106.8	105.5	103.9	+5.3	−2.7	−1.5
Atlanta	95.1	105.0	102.9	101.3	102.4	+7.8	−.4	+1.1
Baltimore	103.2	113.2	112.4	111.6	109.5	+6.2	−2.6	−1.9
Birmingham	99.1	103.7	104.0	103.3	102.3	+3.2	−1.7	−1.0
Boston	101.6	108.0	108.1	106.2	103.6	+2.0	−4.1	−2.4
Bridgeport						+5.2	−2.2	−1.1
Buffalo	103.8	111.8	111.7	110.0	108.4	+4.4	−3.0	−1.5
Butte						−1.4	−2.2	−2.1
Charleston, S.C	100.1	107.8	108.0	107.8	109.3	+9.2	+1.2	+1.4
Chicago	102.3	111.1	110.5	109.4	108.0	+5.6	−2.2	−1.3
Cincinnati	97.4	107.4	109.1	105.0	101.3	+4.0	−7.2	−3.5
Cleveland	91.8	102.4	103.2	101.9	100.7	+9.6	−2.4	−1.2
Columbus						+9.5	−2.0	−.2
Dallas	96.2	103.4	104.5	105.6	103.2	+7.2	−1.3	−2.3
Denver	94.8	100.5	99.3	98.9	97.0	+2.4	−2.3	−1.9
Detroit	91.5	105.0	106.3	104.5	103.1	+12.7	−3.0	−1.3
Fall River	97.3	105.4	105.1	104.5	103.1	+6.0	−1.9	−1.3
Houston						+13.3	−.3	+.6
Indianapolis	93.4	100.6	101.2	99.6	98.0	+4.9	−3.2	−1.6
Jacksonville	90.9	99.4	99.1	99.4	97.8	+7.5	−1.4	−1.7
Kansas City	98.5	103.6	102.7	102.3	100.3	+1.8	−2.4	−2.0
Little Rock	87.4	97.1	97.6	95.5	98.0	+12.1	+.4	+2.7
Los Angeles	93.8	101.9	100.1	98.1	94.9	+1.1	−5.3	−3.3
Louisville	93.2	101.2	101.0	100.1	99.4	+6.6	−1.6	−.7
Manchester	100.2	107.6	108.3	106.7	105.1	+4.9	−2.9	−1.5
Memphis	90.4	99.2	99.3	98.7	97.6	+8.0	−1.6	−1.1
Milwaukee	100.6	109.8	109.2	106.1	103.9	+3.4	−4.8	−2.0
Minneapolis	98.1	106.2	106.1	106.6	104.7	+6.7	−1.3	−1.7
Mobile						+4.8	−1.1	−.6
Newark	102.0	108.0	108.2	106.7	105.4	+3.3	−2.6	−1.3
New Haven	104.5	112.7	111.8	110.1	110.3	+5.6	−1.4	+.1
New Orleans	98.9	105.8	105.9	105.0	104.3	+5.4	−1.6	−.7
New York	106.3	114.6	114.1	113.7	110.6	+4.1	−3.1	−2.0
Norfolk						+4.8	−2.7	−2.9
Omaha	91.0	99.6	100.5	99.8	98.9	+8.7	−1.6	−.4
Peoria						+6.2	−3.0	−2.7
Philadelphia	100.5	111.3	111.2	110.7	108.2	+7.6	−2.7	−2.3
Pittsburgh	96.5	104.2	104.3	104.8	102.2	+5.9	−2.0	−2.4
Portland, Maine						+3.4	−3.0	−2.1
Portland, Oreg	94.1	94.6	94.5	94.1	92.8	−1.3	−1.8	−1.4
Providence	99.9	109.1	108.5	107.8	105.8	+5.9	−2.4	−1.8
Richmond	101.1	110.9	110.1	110.0	109.0	+7.9	−1.0	−.9
Rochester						+7.2	−2.9	−1.5
St. Louis	98.2	107.6	107.4	107.4	104.7	+6.5	−2.5	−2.6
St. Paul						+9.7	−1.0	−1.2
Salt Lake City	86.9	91.0	93.0	91.5	89.1	+2.6	−4.1	−2.6
San Francisco	107.2	110.0	110.3	109.3	106.3	−.9	−3.7	−2.8
Savannah						+6.5	−1.7	−1.4
Scranton	104.9	113.5	114.0	113.9	111.9	+6.8	−1.8	−1.7
Seattle	98.7	103.3	103.1	101.9	99.8	+1.1	−3.2	−2.1
Springfield, Ill						+4.4	−4.0	−3.5
Washington	102.3	114.3	114.6	112.4	110.3	+7.8	−3.8	−1.9
Hawaii:								
Honolulu						+4.9	+.3	
Other localities						+2.1	−1.6	

Retail Prices of Coal, December 15, 1933

RETAIL prices of coal as of the 15th of each month are secured from each of the 51 cities from which retail food prices are obtained. The prices quoted are for coal delivered to consumers but do not include charges for storing the coal in cellar or bins where an extra handling is necessary.

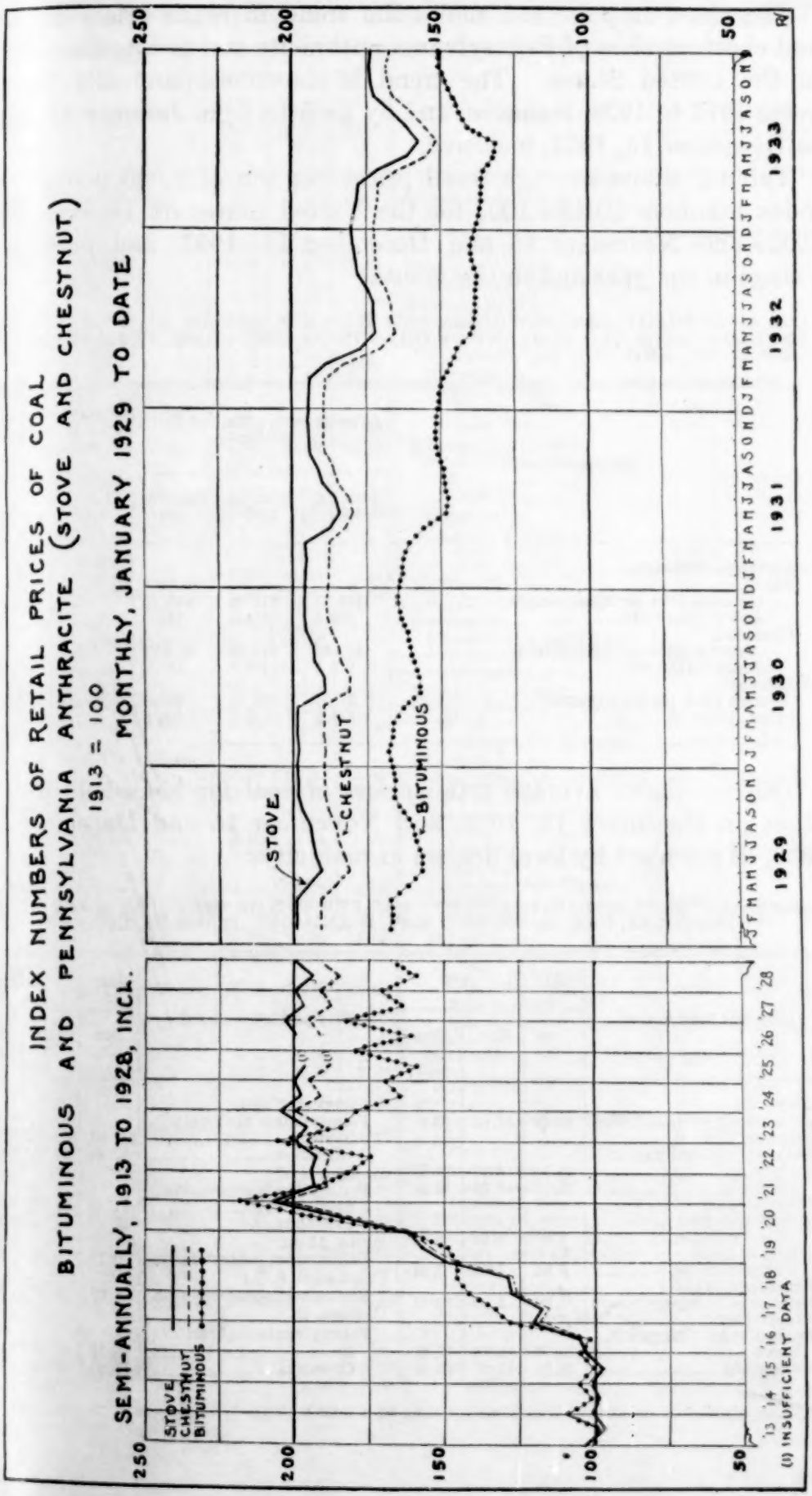
Average prices for the United States for bituminous coal and for stove and chestnut sizes of Pennsylvania anthracite are computed from the quotations received from retail dealers in all cities where these coals are sold for household use. The prices shown for bituminous coal are averages of prices of the several kinds. In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

Table 1 shows for the United States both average prices and index numbers of Pennsylvania white-ash anthracite, stove and chestnut sizes, and of bituminous coal on January 15 and July 15, 1913 to 1931, and for each month from January 15, 1932, to December 15, 1933. An average price for the year 1913 has been made from the averages for January and July of that year. The average price for each month has been divided by this average price for the year 1913 to obtain the index number.

TABLE 1.—AVERAGE RETAIL PRICES AND INDEX NUMBERS OF COAL FOR THE UNITED STATES BASED ON THE YEAR 1913 AS 100, ON THE 15TH OF SPECIFIED MONTHS FROM JANUARY 1913 TO DECEMBER 1933

Year and month	Pennsylvania anthracite, white ash—				Bituminous		Year and month	Pennsylvania anthracite, white ash—				Bituminous	
	Stove		Chestnut					Stove		Chestnut			
	Average price	Index (1913=100)	Average price	Index (1913=100)	Average price	Index (1913=100)		Average price	Index (1913=100)	Average price	Index (1913=100)	Average price	Index (1913=100)
	Dol.		*Dol.*		*Dol.*			*Dol.*		*Dol.*		*Dol.*	
1913: Yr. av.	7.73	100.0	7.91	100.0	5.43	100.0	1929: Jan.	15.38	199.1	15.06	190.3	9.09	167.2
Jan.	7.99	103.4	8.15	103.0	5.48	100.8	July	14.94	193.4	14.63	184.8	8.62	158.6
July	7.46	96.6	7.68	97.0	5.39	99.2	1930: Jan.	15.33	198.4	15.00	189.5	9.11	167.6
1914: Jan.	7.80	100.9	8.00	101.0	5.97	109.9	July	14.84	192.1	14.53	183.6	8.65	159.1
July	7.60	98.3	7.78	98.3	5.46	100.6	1931: Jan.	15.12	195.8	14.88	188.1	8.87	163.2
1915: Jan.	7.83	101.3	7.99	101.0	5.71	105.2	July	14.61	189.1	14.59	184.3	8.09	148.9
July	7.54	97.6	7.73	97.7	5.44	100.1	1932: Jan.	15.00	194.2	14.97	189.1	8.17	150.3
1916: Jan.	7.93	102.7	8.13	102.7	5.69	104.8	Feb.	14.98	193.9	14.95	188.9	8.14	149.7
July	8.12	105.2	8.28	104.6	5.52	101.6	Mar.	14.54	188.2	14.45	182.6	8.01	147.4
1917: Jan.	9.29	120.2	9.40	118.8	6.96	128.1	Apr.	13.62	176.3	13.46	170.0	7.85	144.5
July	9.08	117.5	9.16	115.7	7.21	132.7	May	13.30	172.2	13.11	165.6	7.60	139.9
1918: Jan.	9.88	127.9	10.03	126.7	7.68	141.3	June	13.36	173.0	13.16	166.3	7.53	138.6
July	9.96	128.9	10.07	127.3	7.92	145.8	July	13.37	173.0	13.16	166.2	7.50	138.0
1919: Jan.	11.51	149.0	11.61	146.7	7.90	145.3	Aug.	13.50	174.8	13.28	167.9	7.52	138.4
July	12.14	157.2	12.17	153.8	8.10	149.1	Sept.	13.74	177.9	13.52	170.8	7.54	138.7
1920: Jan.	12.59	162.9	12.77	161.3	8.81	162.1	Oct.	13.79	178.5	13.58	171.5	7.60	139.9
July	14.28	184.9	14.33	181.1	10.55	194.1	Nov.	13.83	178.9	13.60	171.9	7.59	139.7
1921: Jan.	15.99	207.0	16.13	203.8	11.82	217.6	Dec.	13.87	179.5	13.65	172.5	7.51	138.3
July	14.90	192.8	14.95	188.9	10.47	192.7	1933: Jan.	13.82	178.9	13.61	171.9	7.46	137.3
1922: Jan.	14.98	193.9	15.02	189.8	9.89	182.0	Feb.	13.75	178.0	13.53	171.0	7.45	137.0
July	14.87	192.4	14.92	188.5	9.49	174.6	Mar.	13.70	177.3	13.48	170.4	7.43	136.7
1923: Jan.	15.43	199.7	15.46	195.3	11.18	205.7	Apr.	13.22	171.1	13.00	164.3	7.37	135.6
July	15.10	195.5	15.05	190.1	10.04	184.7	May	12.44	161.0	12.25	154.8	7.17	132.0
1924: Jan.	15.77	204.1	15.76	199.1	9.75	179.5	June	12.18	157.6	12.00	151.6	7.18	132.1
July	15.24	197.2	15.10	190.7	8.94	164.5	July	12.47	161.3	12.26	155.0	7.64	140.7
1925: Jan.	15.45	200.0	15.37	194.2	9.24	170.0	Aug.	12.85	166.3	12.65	159.8	7.77	143.0
July	15.14	196.0	14.93	188.6	8.61	158.5	Sept.	13.33	172.5	13.12	165.8	7.94	146.0
1926: Jan.	(1)	(1)	(1)	(1)	9.74	179.3	Oct.	13.44	174.0	13.23	167.1	8.08	148.7
July	15.43	199.7	15.19	191.9	8.70	160.1	Nov.	13.46	174.3	13.26	167.5	8.18	150.6
1927: Jan.	15.66	202.7	15.42	194.8	9.96	183.3	Dec.	13.45	174.0	13.24	167.2	8.18	150.6
July	15.15	196.1	14.81	187.1	8.91	163.9							
1928: Jan.	15.44	199.8	15.08	190.6	9.30	171.1							
July	14.91	192.9	14.63	184.9	8.69	159.9							

[1] Insufficient data.


INDEX NUMBERS OF RETAIL PRICES OF COAL
BITUMINOUS AND PENNSYLVANIA ANTHRACITE (STOVE AND CHESTNUT)
1913 = 100
SEMI-ANNUALLY, 1913 TO 1928, INCL.
MONTHLY, JANUARY 1929 TO DATE
STOVE
CHESTNUT
BITUMINOUS
250
200
150
100
50
'13 '14 '15 '16 '17 '18 '19 '20 '21 '22 '23 '24 '25 '26 '27 '28
J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N
1929
1930
1931
1932
1933
(1) INSUFFICIENT DATA

The chart on page 455 shows the trend in retail prices of stove and chestnut sizes of Pennsylvania anthracite and of bituminous coal in the United States. The trend is shown semiannually for the years 1913 to 1928, inclusive, and by months from January 15, 1929, to December 15, 1933, inclusive.

Table 2 shows average retail prices per ton of 2,000 pounds and index numbers (1913 = 100) for the United States on December 15, 1932, and November 15 and December 15, 1933, and percentage change in the year and in the month.

TABLE 2.—AVERAGE RETAIL PRICES AND INDEX NUMBERS OF COAL FOR THE UNITED STATES AND PERCENT OF CHANGE ON DEC. 15, 1933, COMPARED WITH DEC. 15, 1932, AND NOV. 15, 1933

Article	Average retail price and index number—			Percent of change Dec. 15, 1933, compared with—	
	Dec. 15, 1932	Nov. 15, 1933	Dec. 15, 1933	Dec. 15, 1932	Nov. 15, 1933
Pennsylvania anthracite:					
Stove:					
Average price per 2,000 pounds	$13.87	$13.46	$13.45	−3.0	−0.1
Index (1913=100)	179.5	174.3	174.0		
Chestnut:					
Average price per 2,000 pounds	$13.65	$13.26	$13.24	−3.0	−.2
Index (1913=100)	172.5	167.5	167.2		
Bituminous:					
Average price per 2,000 pounds	$7.51	$8.18	$8.18	+8.9	−.1
Index (1913=100)	138.3	150.6	150.6		

Table 3 shows average retail prices of coal for household use by cities on December 15, 1932, and November 15 and December 15, 1933, as reported by local dealers in each city.

TABLE 3.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, DEC. 15, 1932, AND NOV. 15 AND DEC. 15, 1933, BY CITIES

City and kind of coal	1932	1933		City and kind of coal	1932	1933	
	Dec. 15	Nov. 15	Dec. 15		Dec. 15	Nov. 15	Dec. 15
Atlanta, Ga.:				Bridgeport, Conn.:			
Bituminous, prepared sizes	$6.22	$7.05	$6.98	Pennsylvania anthracite:			
Baltimore, Md.:				Stove	$12.88	$13.75	$13.75
Pennsylvania anthracite:				Chestnut	12.88	13.75	13.75
Stove	13.25	13.29	13.25	Buffalo, N.Y.:			
Chestnut	12.75	13.04	13.00	Pennsylvania anthracite:			
Bituminous:				Stove	12.42	12.85	12.85
Prepared sizes:				Chestnut	12.21	12.60	12.60
Low volatile	9.00	9.56	9.38	Butte, Mont.:			
Run of mine:				Bituminous, prepared sizes	9.73	9.71	9.85
High volatile	6.86	7.61	7.61	Charleston, S.C.:			
Birmingham, Ala.:				Bituminous, prepared sizes	8.67	9.92	9.79
Bituminous, prepared sizes	5.00	6.00	6.01	Chicago, Ill.:			
Boston, Mass.:				Pennsylvania anthracite:			
Pennsylvania anthracite:				Stove	15.75	13.99	13.99
Stove	13.75	13.75	13.75	Chestnut	15.50	13.79	13.79
Chestnut	13.50	13.50	13.50				

TABLE 3.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, DEC. 15, 1932, AND NOV. 15 AND DEC. 15, 1933, BY CITIES—Continued

City and kind of coal	1932	1933	
	Dec. 15	Nov. 15	Dec. 15
Chicago, Ill.—Continued.			
Bituminous:			
Prepared sizes:			
High volatile	$7.25	$8.21	$8.21
Low volatile	9.98	10.83	10.83
Run of mine:			
Low volatile	7.19	7.76	7.76
Cincinnati, Ohio:			
Bituminous:			
Prepared sizes:			
High volatile	5.35	6.10	6.15
Low volatile	7.50	7.98	7.92
Cleveland Ohio:			
Pennsylvania anthracite:			
Stove	13.69	12.44	12.38
Chestnut	13.44	12.19	12.13
Bituminous:			
Prepared sizes:			
High volatile	5.64	6.34	6.20
Low volatile	8.32	9.09	9.00
Columbus, Ohio:			
Bituminous:			
Prepared sizes:			
High volatile	5.06	6.08	6.10
Low volatile	6.50	7.50	7.50
Dallas, Tex.:			
Arkansas anthracite, egg	14.00	14.00	14.00
Bituminous, prepared sizes	10.75	10.50	10.50
Denver, Colo.:			
Colorado anthracite:			
Furnace, 1 and 2 mixed	14.50	15.56	15.50
Stove, 3 and 5 mixed	14.50	15.56	15.50
Bituminous, prepared sizes	7.02	8.24	8.10
Detroit, Mich.:			
Pennsylvania anthracite:			
Stove	13.33	12.62	12.62
Chestnut	13.17	12.36	12.36
Bituminous:			
Prepared sizes:			
High volatile	5.80	6.84	6.84
Low volatile	6.93	7.56	7.65
Run of mine:			
Low volatile	6.38	6.70	6.70
Fall River, Mass.:			
Pennsylvania anthracite:			
Stove	14.50	14.50	14.50
Chestnut	14.25	14.25	14.25
Houston, Tex.:			
Bituminous, prepared sizes	10.00	11.60	11.60
Indianapolis, Ind.:			
Bituminous:			
Prepared sizes:			
High volatile	5.05	5.93	5.93
Low volatile	7.71	8.20	8.20
Run of mine:			
Low volatile	6.10	7.00	7.00
Jacksonville, Fla.:			
Bituminous, prepared sizes	8.50	11.13	11.13
Kansas City, Mo.:			
Arkansas anthracite:			
Furnace	10.63	10.50	10.50
Stove no. 4	12.17	12.58	12.58
Bituminous, prepared sizes	5.61	5.79	5.79
Little Rock, Ark.:			
Arkansas anthracite, egg	10.75	10.50	10.50
Bituminous, prepared sizes	8.39	8.33	8.33
Los Angeles, Calif.:			
Bituminous, prepared sizes	16.25	17.30	17.30
Louisville, Ky.:			
Bituminous:			
Prepared sizes:			
High volatile	4.64	5.63	5.62
Low volatile	7.25	8.00	8.06
Manchester, N.H.:			
Pennsylvania anthracite:			
Stove	$14.83	$15.00	$15.00
Chestnut	14.83	15.00	15.00
Memphis, Tenn.:			
Bituminous, prepared sizes	5.72	7.14	7.14
Milwaukee, Wis.:			
Pennsylvania anthracite:			
Stove	15.05	13.25	13.25
Chestnut	14.80	13.00	13.00
Bituminous:			
Prepared sizes:			
High volatile	6.99	7.51	7.50
Low volatile	9.32	9.62	9.83
Minneapolis, Minn.:			
Pennsylvania anthracite:			
Stove	17.35	15.50	15.50
Chestnut	17.10	15.25	15.25
Bituminous:			
Prepared sizes:			
High volatile	9.56	9.88	9.91
Low volatile	11.85	12.24	12.24
Mobile, Ala.:			
Bituminous, prepared sizes	7.30	8.48	8.46
Newark, N.J.:			
Pennsylvania anthracite:			
Stove	12.25	12.75	12.75
Chestnut	12.00	12.50	12.50
New Haven, Conn.:			
Pennsylvania anthracite:			
Stove	14.00	13.90	13.90
Chestnut	14.00	13.90	13.90
New Orleans, La.:			
Bituminous, prepared sizes	8.57	10.07	10.07
New York, N.Y.:			
Pennsylvania anthracite:			
Stove	12.54	12.55	12.45
Chestnut	12.29	12.30	12.20
Norfolk, Va.:			
Pennsylvania anthracite:			
Stove	13.00	14.00	14.00
Chestnut	13.00	14.00	14.00
Bituminous:			
Prepared sizes:			
High volatile	6.50	8.00	8.00
Low volatile	8.00	9.50	9.50
Run of mine:			
Low volatile	6.50	8.00	8.00
Omaha, Nebr.:			
Bituminous, prepared sizes	8.48	8.55	8.56
Peoria, Ill.:			
Bituminous, prepared sizes	6.02	6.44	6.43
Philadelphia, Pa.:			
Pennsylvania anthracite:			
Stove	11.75	12.25	12.25
Chestnut	11.50	12.00	12.00
Pittsburgh, Pa.:			
Pennsylvania anthracite:			
Chestnut	13.00	13.00	12.88
Bituminous, prepared sizes	3.50	4.82	4.75
Portland, Maine:			
Pennsylvania anthracite:			
Stove	15.84	14.50	14.50
Chestnut	15.60	14.25	14.25
Portland, Oreg.:			
Bituminous, prepared sizes	11.52	12.88	12.88
Providence, R.I.:			
Pennsylvania anthracite:			
Stove	[1] 14.75	[1] 15.00	[1] 14.75
Chestnut	[1] 14.50	[1] 14.75	[1] 14.50

[1] The average price of coal delivered in bins is 50 cents higher than here shown. Practically all coal is delivered in bins.

TABLE 3.—AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, DEC. 15, 1932, AND NOV. 15 AND DEC. 15, 1933, BY CITIES—Continued

City and kind of coal	1932	1933	
	Dec. 15	Nov. 15	Dec. 15
Richmond, Va.:			
Pennsylvania anthracite:			
Stove	$13.50	$14.00	$14.00
Chestnut	13.50	14.00	14.00
Bituminous:			
Prepared sizes:			
High volatile	6.83	7.83	7.83
Low volatile	8.08	8.87	8.87
Run of mine:			
Low volatile	6.75	7.25	7.25
Rochester, N.Y.:			
Pennsylvania anthracite:			
Stove	13.38	13.10	13.10
Chestnut	13.13	12.85	12.85
St. Louis, Mo.:			
Pennsylvania anthracite:			
Stove	15.22	13.91	13.91
Chestnut	15.22	13.72	13.72
Bituminous, prepared sizes	5.47	5.54	5.55
St. Paul, Minn.:			
Pennsylvania anthracite:			
Stove	17.35	15.50	15.50
Chestnut	17.10	15.25	15.25
Bituminous:			
Prepared sizes:			
High volatile	9.42	9.98	9.98
Low volatile	11.87	12.33	12.33
Salt Lake City, Utah:			
Bituminous, prepared sizes	$7.17	$7.78	$7.78
San Francisco, Calif.:			
New Mexico anthracite:			
Cerillos egg	.....	25.63	25.63
Colorado anthracite:			
Egg	.....	25.11	25.11
Bituminous, prepared sizes	15.00	16.06	16.06
Savannah, Ga.:			
Bituminous, prepared sizes	[1] 8.12	[1] 10.04	[1] 10.04
Scranton, Pa.:			
Pennsylvania anthracite:			
Stove	9.28	8.85	8.85
Chestnut	9.00	8.60	8.60
Seattle, Wash.:			
Bituminous, prepared sizes	9.79	9.70	9.73
Springfield, Ill.:			
Bituminous, prepared sizes	3.79	4.08	4.09
Washington, D.C.:			
Pennsylvania anthracite:			
Stove	[2] 14.46	[2] 14.45	[2] 14.45
Chestnut	[2] 14.15	[2] 14.15	[2] 14.15
Bituminous:			
Prepared sizes:			
High volatile	[2] 8.29	[2] 8.69	[2] 8.64
Low volatile	[2] 10.21	[2] 10.31	[2] 10.31
Run of mine:			
Mixed	[2] 7.56	[2] 7.98	[2] 7.88

[1] All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above price.
[2] Per ton of 2,240 pounds.

Retail Prices of Gas in December 1933

THE net price per 1,000 cubic feet of gas for household use in each of 51 cities is published in June and December of each year in conjunction with the cost-of-living study. The average family consumption of manufactured gas is estimated to be 3,000 cubic feet per month. In cities where a service charge or a sliding scale is in operation, families using less than 3,000 cubic feet per month pay a somewhat higher rate than here shown; while those consuming more than this amount pay a lower rate. The figures here given are believed to represent quite closely the actual monthly cost of gas per 1,000 cubic feet to the average wage-earner's family.

From the prices quoted on manufactured gas, average net prices have been computed for all cities combined. Prices and index numbers showing the trend since April 1913 are shown in table 1. The index numbers are based on the price in April 1913.

TABLE 1.—AVERAGE PRICE PER 1,000 CUBIC FEET OF MANUFACTURED GAS AND INDEX NUMBER IN SPECIFIED MONTHS OF EACH YEAR 1913 AND 1928 TO 1933 FOR THE UNITED STATES

Date	Average net price	Index (April 1913=100)	Date	Average net price	Index (April 1913=100)
1913—April	$0.95	100.0	1931—June	$1.18	124.2
1928—December	1.22	128.4	December	1.15	112.1
1929—December	1.21	127.4	1932—June	1.15	121.1
1930—June	1.21	127.4	December	1.15	121.1
December	1.18	124.2	1933—June	1.14	120.0
			December	1.14	120.0

Table 2 shows the net price of manufactured gas on June 15, 1933, and December 15, 1933, by cities. These prices are based on an estimated average family consumption of 3,000 cubic feet per month.

TABLE 2.—NET PRICE PER 1,000 CUBIC FEET OF MANUFACTURED GAS BASED ON A FAMILY CONSUMPTION OF 3,000 CUBIC FEET ON JUNE 15, 1933, AND DECEMBER 15, 1933, BY CITIES

City	June 15, 1933	Dec. 15, 1933	City	June 15, 1933	Dec. 15, 1933
Baltimore	$0.85	$0.85	Norfolk	$1.18	$1.18
Birmingham	.80	.80	Omaha	.79	.79
Boston	1.16	1.16	Philadelphia	.88	.88
Charleston, S.C.	1.45	1.45	Portland, Maine	1.42	1.42
Cleveland	1.25	1.25	Portland, Oreg.	1.17	1.17
Detroit	.77	.79	Providence	1.13	1.13
Fall River	1.14	1.14	Richmond	1.29	1.29
Indianapolis	.95	.95	Rochester	1.00	1.00
Jacksonville	1.92	1.92	St. Louis	[1] 1.30	[1] 1.30
Manchester	1.34	1.34	St. Paul	.90	.90
Milwaukee	.82	.82	Savannah	1.45	1.45
Minneapolis	.96	.96	Scranton	1.40	1.40
Newark	1.21	1.21	Seattle	1.48	1.42
New Haven	1.13	1.13	Washington	.84	.84
New York	1.21	1.22	Honolulu, T.H.	1.68	1.68

[1] Price based on 24 therms.

Table 3 shows by cities net prices on June 15, 1933, and December 15, 1933, for natural gas, and for mixed manufactured and natural gas (preponderantly natural gas). These prices are based on an estimated average family consumption of 5,000 cubic feet per month.

TABLE 3.—NET PRICE PER 1,000 CUBIC FEET OF NATURAL GAS AND OF MIXED MANUFACTURED AND NATURAL GAS (PREPONDERANTLY NATURAL GAS) BASED ON A FAMILY CONSUMPTION OF 5,000 CUBIC FEET ON JUNE 15, 1933, AND DECEMBER 15, 1933, BY CITIES

City	June 15, 1933	Dec. 15, 1933	City	June 15, 1933	Dec. 15, 1933
Atlanta	$1.09	$1.09	Little Rock	$0.65	$0.65
Buffalo	.65	.65	Los Angeles	.82	.79
Butte	.70	.70	Louisville	.45	.45
Chicago	[1] 1.32	[1] 1.30	Memphis	.95	.95
Cincinnati	.75	.75	Mobile	1.24	1.24
Cleveland	.60	.60	New Orleans	.95	.95
Columbus	.55	.55	Peoria	[2] 1.95	[2] 1.95
Dallas	.79	.79	Pittsburgh	.60	.60
Denver	.99	.99	Salt Lake City	.99	1.01
Houston	.75	.75	San Francisco	.97	.97
Kansas City	.95	.94	Springfield	[2] 2.00	[2] 2.00

[1] Price based on 40 therms which is the equivalent of 5,000 cubic feet of gas of a heating value of 800 B.t.u. per cubic foot.

[2] Price based on 50 therms which is the equivalent of 5,000 cubic feet of gas of a heating value of 1,000 B.t.u. per cubic foot.

Retail Prices of Electricity in December 1933

THE following table shows for 51 cities the net rates per kilowatt-hour of electricity used for household purposes in June 1933 and December 1933. These rates are published in June and December of each year in conjunction with the cost-of-living study. For the cities having more than one tariff for domestic consumers the rates are shown for the schedule under which most of the residences are served.

Several cities have sliding scales based on a variable number of kilowatt-hours payable at each rate. The number of kilowatt-hours payable at each rate in these cities is determined for each customer according to the watts of installation, either in whole or in part, in the individual home. The number of watts so determined is called the customer's "demand." Footnotes applicable to these cities are shown in the table.

TABLE 1.—NET PRICE PER KILOWATT-HOUR FOR ELECTRICITY FOR HOUSEHOLD USE ON JUNE 15, 1933, AND DEC. 15, 1933, FOR 51 CITIES

City	Measure of consumption, per month	June 15, 1933 [1]	Dec. 15, 1933
		Cents	*Cents*
Atlanta	First 25 kilowatt-hours	[2] 100.0	6.5
	Next 35 kilowatt-hours	[3] 6.0	5.0
	Next 140 kilowatt-hours	[3] 4.5	3.0
	Excess	[4] 3.0	1.5
Baltimore	First 50 kilowatt-hours	5.0	5.0
	Next 175 kilowatt-hours	3.4	3.4
Birmingham	First 4 kilowatt-hours per room	[5] 7.7	6.5
	Next 6 kilowatt-hours per room		5.0
Boston	First 2 kilowatt-hours per 100 square feet of floor area	7.5	7.5
	Next 70 kilowatt-hours	5.0	5.0
	Excess	3.0	3.0
Bridgeport	First 400 kilowatt-hours	5.3	5.3
Buffalo	First 60 hours' use of demand [6]	5.0	5.0
	Next 120 hours' use of demand [6]	4.0	4.0
	Excess	1.5	1.5
Butte	First 25 kilowatt-hours	8.0	8.0
	Next 25 kilowatt-hours	4.0	4.0
	Next 100 kilowatt-hours	3.0	3.0
Charleston, S.C.	First 30 kilowatt-hours	[5] 9.0	8.5
	Next 40 kilowatt-hours		6.0
Chicago	First 3 kilowatt-hours per room	7.0	7.0
	Next 3 kilowatt-hours per room	5.0	5.0
	Excess	3.0	3.0
Cincinnati	Service charge per room	10.0	10.0
	First 6 kilowatt-hours per room; minimum 4 rooms	5.0	5.0
	Excess	3.0	3.0
Cleveland:			
Company A	First 240 kilowatt-hours	4.0	4.0
	Excess	2.8	2.8
Company B	Service charge	15.0	15.0
	First 600 kilowatt-hours	2.9	2.9
Columbus	First 50 kilowatt-hours	6.0	[7] 6.0
	Next 75 kilowatt-hours	5.0	[7] 5.0
Dallas	First 800 kilowatt-hours	5.8	5.8
Denver	First 40 kilowatt-hours	6.0	6.0
	Excess	5.0	5.0
Detroit	First 3 kilowatt-hours per active room; minimum, 3 rooms	9.0	[8] 9.0
	Next 50 kilowatt-hours	3.6	[8] 3.6
	Excess	2.3	[8] 2.3
Fall River	First 25 kilowatt-hours	8.0	[8] 8.0
	Next 75 kilowatt-hours	5.0	5.0
Houston	First 3 kilowatt-hours per room; minimum, 4 rooms	7.0	7.0
	Next 100 kilowatt-hours	4.0	4.0
Indianapolis	First 50 kilowatt-hours	6.3	6.3
	Next 50 kilowatt-hours	6.0	6.0
Jacksonville	First 500 kilowatt-hours	7.0	7.0
Kansas City	First 5 kilowatt-hours per active room; minimum, 3 rooms	6.5	6.5
	Next 5 kilowatt-hours per room	4.5	4.5
	Excess	2.5	2.5
Little Rock	Service charge for 4 rooms or less. For each additional room 10 cents is added.	50.0	50.0
	First 6 kilowatt-hours per room	7.0	7.0
	Next 6 kilowatt hours per room	5.0	5.0
	Excess	3.0	3.0

See footnotes at end of table.

TABLE 1.—NET PRICE PER KILOWATT-HOUR FOR ELECTRICITY FOR HOUSEHOLD USE ON JUNE 15, 1933 AND DEC. 15, 1933, FOR 51 CITIES—Continued

City	Measure of consumption, per month	June 15, 1933	Dec. 15, 1933
		Cents	*Cents*
Los Angeles	First 35 kilowatt-hours	4.8	4.8
	Next 140 kilowatt-hours	2.5	2.5
Louisville	First 30 kilowatt-hours plus balance of consumption up to 6 kilowatt-hours per room.	7.6	7.6
	Excess	3.0	3.0
Manchester	First block: 3 rooms, 15 kilowatt-hours; 4 rooms, 18 kilowatt-hours; 5 rooms, 21 kilowatt-hours; 6 rooms, 24 kilowatt-hours; 7 rooms, 27 kilowatt-hours; 8 rooms, 30 kilowatt-hours.	10.0	10.0
	Next block: Number of kilowatt-hours equal to the first block	6.0	6.0
Memphis	First 6 kilowatt-hours per room; minimum 4 rooms	7.0	7.0
	Next 6 kilowatt-hours per room	5.0	5.0
	Excess	3.0	3.0
Milwaukee	First 9 kilowatt-hours for each of the first 6 active rooms and first 7 kilowatt-hours for each active room in addition to the first 6.	6.2	6.2
	Next kilowatt-hours up to a total of 150 kilowatt-hours	2.9	2.9
	Excess	1.9	1.9
Minneapolis	First 3 kilowatt-hours per active room; minimum, 2 rooms	7.6	7.6
	Next 3 kilowatt-hours per active room	7.1	7.1
	Excess	2.9	2.9
Mobile	Service charge for house of 3 rooms—consumption of 5 kilowatt-hours included, 10 cents extra for each additional room; not more than 10 rooms counted.	80.0	80.0
	Next 45 kilowatt-hours	5.0	5.0
	Next 150 kilowatt-hours	3.0	3.0
Newark	First 20 kilowatt-hours	9.0	9.0
	Next 20 kilowatt-hours	7.0	7.0
	Next 10 kilowatt-hours	6.0	6.0
	Excess of 50 kilowatt-hours	3.0	3.0
New Haven	First 400 kilowatt-hours	5.3	5.3
New Orleans	Service charge	25.0	25.0
	First 20 kilowatt-hours	9.1	9.1
	Next 30 kilowatt-hours	7.8	7.8
	Next 150 kilowatt-hours	6.5	6.5
New York:			
Company A[9]	10 kilowatt-hours or less	100.0	100.0
	Next 5 kilowatt-hours	6.0	6.0
	Excess	5.0	5.0
Company B	10 kilowatt-hours or less	95.0	95.0
	Next 21 kilowatt-hours	9.0	9.0
	Next 89 kilowatt-hours	4.0	4.0
Company C[9]	10 kilowatt-hours or less	100.0	100.0
	Next 5 kilowatt-hours	6.0	6.0
	Excess	5.0	5.0
Norfolk	First 100 kilowatt-hours	7.0	7.0
Omaha	First 10 kilowatt-hours per room	5.5	5.5
	Next 160 kilowatt-hours	3.0	3.0
Peoria	First 10 kilowatt-hours or less	[10] 9.0	75.0
	Next 6 kilowatt-hours per active room	[11] 6.0	5.0
	Next 24 kilowatt-hours per active room	[12] 3.0	3.0
Philadelphia:			
Company A	Minimum charge including use of first 10 kilowatt-hours	75.0	75.0
	Next 40 kilowatt-hours	5.5	5.5
	Next 150 kilowatt-hours	3.0	3.0
Company B	First 20 kilowatt-hours	9.0	9.0
	Next 20 kilowatt-hours	7.0	7.0
	Next 10 kilowatt-hours	6.0	6.0
	Excess of 50 kilowatt-hours	3.0	3.0
Pittsburgh	First 15-kilowatt-hours	7.0	7.0
	Next 15 kilowatt-hours	5.0	5.0
	Next 20 kilowatt-hours	4.0	4.0
	Excess	3.0	3.0
Portland, Maine	First 3 rooms, 15 kilowatt-hours; 4 rooms, 18 kilowatt-hours; 5 rooms, 21 kilowatt-hours; 6 rooms, 24 kilowatt-hours; 7 rooms, 27 kilowatt-hours; 8 rooms, 30 kilowatt-hours.	8.0	8.0
	Next 3 rooms, 35 kilowatt-hours; 4 rooms, 42 kilowatt-hours; 5 rooms, 49 kilowatt-hours; 6 rooms, 56 kilowatt-hours; 7 rooms, 63 kilowatt-hours; 8 rooms, 70 kilowatt-hours.	5.0	5.0
	Excess	2.0	2.0
Portland, Oreg.:			
Company A	First 30 kilowatt-hours for a connected load of 600 wats or less. For each additional 25 watts of connected load add 1 kilowatt-hour.	5.5	[13] 5.5
	Next 40 kilowatt-hours	3.0	[13] 3.0
	Excess	1.8	[13] 1.8
Company B	First 30 kilowatt-hours for a connected load of 600 watts or less. For each additional 25 watts of connected load add 1 kilowatt-hour.	5.5	5.5
	Next 40 kilowatt-hours	3.0	3.0
	Excess	1.8	1.8

See footnotes at end of table.

TABLE 1.—NET PRICE PER KILOWATT-HOUR FOR ELECTRICITY FOR HOUSEHOLD USE ON JUNE 15, 1933, AND DEC. 15, 1933, FOR 51 CITIES—Continued

City	Measure of consumption, per month	June 15, 1933	Dec. 15, 1933
		Cents	*Cents*
Providence	Service charge including 3 kilowatt-hours	50.0	50.0
	Next 60 kilowatt-hours	6.5	6.5
	Next 30 kilowatt-hours	4.0	4.0
Richmond	First 100 kilowatt-hours	7.0	7.0
Rochester	Service charge including first 12 kilowatt-hours	100.0	100.0
	Next 48 kilowatt-hours	5.5	5.0
	Next 40 kilowatt-hours	[14] 4.0	4.0
St. Louis:			
Company A	First 32 kilowatt-hours	[13] 6.7	4.8
	Next 168 kilowatt-hours	[12] 2.4	2.4
Company B	First 25 kilowatt-hours	[16] 6.7	4.3
	Next 150 kilowatt-hours	[12] 2.4	2.4
St. Paul	First 3 kilowatt-hours per room, minimum 2 rooms	8.6	8.6
	Next 3 kilowatt-hours per room	7.1	7.1
	Excess	2.9	2.9
Salt Lake City	Service charge—consumption of 11 kilowatt-hours included	90.0	90.0
	Excess	7.0	7.0
San Francisco	Service charge	40.0	40.0
	First 30 kilowatt-hours for residence of 6 rooms, 5 kilowatt-hours added for each additional room.	4.5	4.5
	Next 140 kilowatt-hours	3.5	3.5
Savannah	Service charge	100.0	100.0
	First 50 kilowatt-hours	6.0	6.0
	Next 150 kilowatt-hours	3.0	3.0
Scranton	Service charge	100.0	100.0
	All current	5.0	5.0
Seattle:			
Company A	First 40 kilowatt-hours	5.5	5.5
	Next 200 kilowatt-hours	2.0	2.0
Company B	First 40 kilowatt-hours	5.5	5.5
	Next 200 kilowatt-hours	2.0	2.0
Springfield, Ill.:			
Company A	First 30 kilowatt-hours	5.0	5.0
	Next 30 kilowatt-hours	4.0	4.0
	Next 40 kilowatt-hours	3.0	3.0
Company B	First 30 kilowatt-hours	5.0	5.0
	Next 30 kilowatt-hours	4.0	4.0
	Next 40 kilowatt-hours	3.0	3.0
Washington, D.C.	First 50 kilowatt-hours	4.0	3.9
	Next 50 kilowatt-hours	3.9	3.6
Honolulu, Hawaii	First 100 kilowatt-hours	7.5	7.5

[1] Federal tax of 3 percent applicable to rates on June 15, 1933.
[2] Service charge including 5 kilowatt-hours.
[3] Next 25 kilowatt-hours.
[4] Next 145 kilowatt-hours.
[5] First 100 kilowatt-hours.
[6] The demand shall be calculated at 25 percent of the total number of lamp sockets rated at 40 watts each, minimum 250 watts, plus 2½ percent of the rating of heating and cooking devices of 1,500 watts or over and 25 percent of other devices larger than one half horse power.
[7] Plus State tax of 2.35 percent.
[8] Plus State tax of 3 percent.
[9] Rates are subject to adjustment under coal clause. For the months shown there was a deduction of 5 mills per kilowatt-hour.
[10] First 4 kilowatt-hours per active room, minimum 2 rooms.
[11] Next 4 kilowatt-hours per active room.
[12] Excess.
[13] Plus city franchise tax of 3 percent.
[14] Next 34 kilowatt-hours.
[15] First 9 kilowatt-hours per active room.
[16] First 4 rooms or less, 18 kilowatt-hours; 5 or 6 rooms, 27 kilowatt-hours; 7 or 8 rooms, 36 kilowatt-hours.

Table 2 shows the percent of decrease in the price of electricity since December 1913. This utility decreased 24.7 percent since that time. A decrease of 6.1 percent was reported for the current 6-month period ending December 1933.

TABLE 2.—PERCENT OF DECREASE IN THE PRICE OF ELECTRICITY AT SPECIFIED PERIODS AS COMPARED WITH DECEMBER 1913

Date	Percent of decrease from December 1913	Date	Percent of decrease from December 1913	Date	Percent of decrease from December 1913
December 1914	3.7	September 1922	6.2	June 1927	12.3
December 1915	6.2	December 1922	7.4	December 1927	12.3
December 1916	8.6	March 1923	7.4	June 1928	13.6
December 1917	11.1	June 1923	7.4	December 1928	14.8
December 1918	6.2	September 1923	8.6	June 1929	17.3
June 1919	6.2	December 1923	8.6	December 1929	17.3
December 1919	7.4	March 1924	8.6	June 1930	18.5
June 1920	7.4	June 1924	8.6	December 1930	18.5
December 1920	4.9	September 1924	8.6	June 1931	19.8
May 1921	4.9	December 1924	8.6	December 1931	19.8
September 1921	4.9	June 1925	9.9	June 1932	21.0
December 1921	4.9	December 1925	9.9	December 1932	19.8
March 1922	4.9	June 1926	11.1	June 1933	19.8
June 1922	6.2	December 1926	11.1	December 1933	24.7

WHOLESALE PRICES

Index Numbers of Wholesale Prices, 1913 to December 1933

THE following table presents the index numbers of wholesale prices by groups of commodities, by years, from 1913 to 1933, inclusive, and by months from January 1932 to date:

INDEX NUMBERS OF WHOLESALE PRICES

[1926=100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
1913	71.5	64.2	68.1	57.3	61.3	90.8	56.7	80.2	56.3	93.1	69.8
1914	71.2	64.7	70.9	54.6	56.6	80.2	52.7	81.4	56.8	89.9	68.1
1915	71.5	65.4	75.5	54.1	51.8	86.3	53.5	112.0	56.0	86.9	69.5
1916	84.4	75.7	93.4	70.4	74.3	116.5	67.6	160.7	61.4	100.6	85.5
1917	129.0	104.5	123.8	98.7	105.4	150.6	88.2	165.0	74.2	122.1	117.5
1918	148.0	119.1	125.7	137.2	109.2	136.5	98.6	182.3	93.3	134.4	131.3
1919	157.6	129.5	174.1	135.3	104.3	130.9	115.6	157.0	105.9	139.1	138.6
1920	150.7	137.4	171.3	164.8	163.7	149.4	150.1	164.7	141.8	167.5	154.4
1921	88.4	90.6	109.2	94.5	96.8	117.5	97.4	115.0	113.0	109.2	97.6
1922	93.8	87.6	104.6	100.2	107.3	102.9	97.3	100.3	103.5	92.8	96.7
1923	98.6	92.7	104.2	111.3	97.3	109.3	108.7	101.1	108.9	99.7	100.6
1924	100.0	91.0	101.5	106.7	92.0	106.3	102.3	98.9	104.9	93.6	98.1
1925	109.8	100.2	105.3	108.3	96.5	103.2	101.7	101.8	103.1	109.0	103.5
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927	99.4	96.7	107.7	95.6	88.3	96.3	94.7	96.8	97.5	91.0	95.4
1928	105.9	101.0	121.4	95.5	84.3	97.0	94.1	95.6	95.1	85.4	96.7
1929	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.2	94.3	82.6	95.3
1930	88.3	90.5	100.0	80.3	78.5	92.1	89.9	89.1	92.7	77.7	86.4
1931	64.8	74.6	86.1	66.3	67.5	84.5	79.2	79.3	84.9	69.8	73.0
1932	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.5	75.1	64.4	64.8
1933	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.6	75.8	62.5	65.9
1932:											
January	52.8	64.7	79.3	59.6	67.9	81.8	74.8	75.7	77.7	65.6	67.3
February	50.6	62.5	78.3	59.5	68.3	80.9	73.4	75.5	77.5	64.7	66.3
March	50.2	62.3	77.3	58.0	67.9	80.8	73.2	75.3	77.1	64.7	66.0
April	49.2	61.0	75.0	56.1	70.2	80.3	72.5	74.4	76.3	64.7	65.5
May	46.6	59.3	72.5	54.3	70.7	80.1	71.5	73.6	74.8	64.4	64.4
June	45.7	58.8	70.8	52.7	71.6	79.9	70.8	73.1	74.7	64.2	63.9
July	47.9	60.9	68.6	51.5	72.3	79.2	69.7	73.0	74.0	64.3	64.5
August	49.1	61.8	69.7	52.7	72.1	80.1	69.6	73.3	73.6	64.6	65.2
September	49.1	61.8	72.2	55.6	70.8	80.1	70.5	72.9	73.7	64.7	65.3
October	46.9	60.5	72.8	55.0	71.1	80.3	70.7	72.7	73.7	64.1	64.4
November	46.7	60.6	71.4	53.9	71.4	79.6	70.7	72.4	73.7	63.7	63.9
December	44.1	58.3	69.6	53.0	69.3	79.4	70.8	72.3	73.6	63.4	62.6
1933:											
January	42.6	55.8	68.9	51.9	66.0	78.2	70.1	71.6	72.9	61.2	61.0
February	40.9	53.7	68.0	51.2	63.6	77.4	69.8	71.3	72.3	59.2	59.8
March	42.8	54.6	68.1	51.3	62.9	77.2	70.3	71.2	72.2	58.9	60.2
April	44.5	56.1	69.4	51.8	61.5	76.9	70.2	71.4	71.5	57.8	60.4
May	50.2	59.4	76.9	55.9	60.4	77.7	71.4	73.2	71.7	58.9	62.7
June	53.2	61.2	82.4	61.5	61.5	79.3	74.7	73.7	73.4	60.8	65.0
July	60.1	65.5	86.3	68.0	65.3	80.6	79.5	73.2	74.8	64.0	68.9
August	57.6	64.8	91.7	74.6	65.5	81.2	81.3	73.1	77.6	65.4	69.5
September	57.0	64.9	92.3	76.9	70.4	82.1	82.7	72.7	79.3	65.1	70.8
October	55.7	64.2	89.0	77.1	73.6	83.0	83.9	72.7	81.2	65.3	71.2
November	56.6	64.3	88.2	76.8	73.5	82.7	84.9	73.4	81.0	65.5	71.1
December	55.5	62.5	89.2	76.4	73.4	83.5	85.6	73.7	81.0	65.7	70.8

INDEX NUMBERS OF SPECIFIED GROUPS OF COMMODITIES

[1926=100]

Year	Raw materials	Semi-manufactured articles	Finished products	Non-agricultural commodities	All commodities other than farm products and foods	Month	Raw materials	Semi-manufactured articles	Finished products	Non-agricultural commodities	All commodities other than farm products and foods
1913	68.8	74.9	69.4	69.0	70.0	1932:					
1914	67.6	70.0	67.8	66.8	66.4	January	58.3	63.1	72.1	70.3	71.7
1915	67.2	81.2	68.9	68.5	68.0	February	56.9	61.9	71.4	69.6	71.3
1916	82.6	118.3	82.3	85.3	88.3	March	56.1	60.8	71.5	69.3	70.9
1917	122.6	150.4	109.2	113.1	114.2	April	55.5	59.6	71.1	68.9	70.9
1918	135.8	153.8	124.7	125.1	124.6	May	53.9	58.1	70.3	68.1	70.4
1919	145.9	157.9	130.6	131.6	128.8	June	53.2	57.6	70.0	67.8	70.1
1920	151.8	198.2	149.8	154.8	161.3	July	54.7	55.5	70.5	68.0	69.7
1921	88.3	96.1	103.3	100.1	104.9	August	55.7	57.9	70.7	68.5	70.1
1922	96.0	98.9	96.5	97.3	102.4	September	56.2	60.7	70.4	68.7	70.4
1923	98.5	118.6	99.2	100.9	104.3	October	54.6	60.7	69.6	68.1	70.2
1924	97.6	108.7	96.3	97.1	99.7	November	54.2	58.9	69.3	67.5	69.8
1925	106.7	105.3	100.6	101.4	102.6	December	52.1	57.7	68.4	66.5	69.0
1926	100.0	100.0	100.0	100.0	100.0	1933:					
1927	96.5	94.3	95.0	94.6	94.0	January	50.2	56.9	66.7	64.9	67.3
1928	99.1	94.5	95.9	94.8	92.9	February	48.4	56.3	65.7	63.7	66.0
1929	97.5	93.9	94.5	93.3	91.6	March	49.4	56.9	65.7	63.8	65.8
1930	84.3	81.8	88.0	85.9	85.2	April	50.0	57.3	65.7	63.7	65.3
1931	65.6	69.0	77.0	74.6	75.0	May	53.7	61.3	67.2	65.4	66.5
1932	55.1	59.3	70.3	68.3	70.2	June	56.2	65.3	69.0	67.4	68.9
1933	56.5	65.4	70.5	69.0	71.2	July	61.8	69.1	72.2	70.7	72.2
						August	60.6	71.7	73.4	72.0	74.1
						September	61.7	72.9	74.8	73.7	76.1
						October	61.8	72.8	75.4	74.4	77.2
						November	62.4	71.4	75.2	74.2	77.2
						December	61.9	72.3	74.8	74.0	77.5

Weekly Index Numbers of Wholesale Prices

A SUMMARIZATION of the weekly index numbers for the 10 major groups of commodities and for all commodities combined as issued during the month of December 1933 will be found in the following table:

INDEX NUMBERS OF WHOLESALE PRICES FOR WEEKS OF DEC. 2, 9, 16, 23, AND 30, 1933

[1926=100]

Group	Week ending—				
	Dec. 2, 1933	Dec. 9, 1933	Dec. 16, 1933	Dec. 23, 1933	Dec. 30, 1933
All commodities	70.7	70.9	70.8	70.4	70.8
Farm products	55.9	56.0	55.9	54.8	56.0
Foods	63.2	63.3	63.0	61.6	62.5
Hides and leather products	89.1	89.0	88.6	89.2	89.6
Textile products	75.4	75.9	76.0	76.0	76.0
Fuel and lighting materials	73.8	74.5	74.2	74.4	74.5
Metals and metals products	83.4	83.3	83.1	83.2	83.3
Building materials	85.2	85.3	85.3	85.3	85.4
Chemicals and drugs	73.7	73.6	73.4	73.4	73.3
Housefurnishing goods	82.0	81.8	81.7	81.9	81.9
Miscellaneous	65.3	65.6	65.6	65.5	65.6

Purchasing Power of the Dollar, 1913 to December 1933

CHANGES in the buying power of the dollar expressed in terms of wholesale prices from 1913 to December 1933 are shown in the following table. The figures in this table are reciprocals of the index numbers. To illustrate, the index number representing the level of all commodities at wholesale in December 1933 with average prices for the year 1926 as the base, is shown to be 70.8. The reciprocal of this index number is 0.01412 which, translated into dollars and cents, becomes $1.412. The table shows that the dollar expanded so much in its buying value that $1 of 1926 had increased in value to $1.412 in December 1933 in the purchase of all commodities at wholesale.

The purchasing power of the dollar for all groups and subgroups of commodities for the current month of last year will be found on page 472 of this publication.

PURCHASING POWER OF THE DOLLAR EXPRESSED IN TERMS OF WHOLESALE PRICES

[1926=$1]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
1913	$1.399	$1.558	$1.468	$1.745	$1.631	$1.101	$1.764	$1.247	$1.776	$1.074	$1.433
1914	1.404	1.546	1.410	1.832	1.767	1.247	1.898	1.229	1.761	1.112	1.468
1915	1.399	1.529	1.325	1.848	1.931	1.159	1.869	.893	1.786	1.151	1.439
1916	1.185	1.321	1.071	1.420	1.346	.858	1.479	.622	1.629	.994	1.170
1917	.775	.957	.808	1.013	.949	.664	1.134	.606	1.348	.819	.851
1918	.676	.840	.796	.729	.916	.733	1.014	.549	1.072	.744	.762
1919	.635	.772	.574	.739	.959	.764	.865	.637	.944	.719	.722
1920	.664	.728	.584	.607	.611	.669	.666	.607	.705	.597	.648
1921	1.131	1.104	.916	1.058	1.033	.851	1.027	.870	.885	.961	1.025
1922	1.066	1.142	.956	.998	.932	.972	1.028	.997	.966	1.078	1.034
1923	1.014	1.079	.960	.898	1.028	.915	.920	.989	.918	1.003	.994
1924	1.000	1.099	.985	.937	1.087	.941	.978	1.011	.953	1.068	1.019
1925	.911	.998	.950	.923	1.036	.969	.983	.982	.970	.917	.966
1926	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
1927	1.006	1.034	.929	1.046	1.133	1.038	1.056	1.033	1.026	1.099	1.048
1928	.944	.990	.824	1.047	1.186	1.031	1.063	1.046	1.052	1.171	1.034
1929	.953	1.001	.917	1.106	1.205	.995	1.048	1.062	1.060	1.211	1.049
1930	1.133	1.105	1.000	1.245	1.274	1.086	1.112	1.122	1.079	1.287	1.157
1931	1.543	1.340	1.161	1.508	1.481	1.183	1.263	1.261	1.178	1.433	1.370
1932	2.075	1.639	1.372	1.821	1.422	1.247	1.401	1.361	1.332	1.553	1.543
1933	1.946	1.653	1.236	1.543	1.508	1.253	1.299	1.377	1.319	1.600	1.517
1932:											
January	1.894	1.546	1.261	1.678	1.473	1.222	1.337	1.321	1.287	1.524	1.486
February	1.976	1.600	1.277	1.681	1.464	1.236	1.362	1.325	1.290	1.546	1.508
March	1.992	1.605	1.294	1.724	1.473	1.238	1.366	1.328	1.297	1.546	1.515
April	2.033	1.639	1.333	1.783	1.425	1.245	1.379	1.344	1.311	1.546	1.527
May	2.146	1.686	1.379	1.842	1.414	1.248	1.399	1.359	1.337	1.553	1.553
June	2.188	1.701	1.412	1.898	1.397	1.252	1.412	1.368	1.339	1.558	1.565
July	2.088	1.642	1.458	1.942	1.383	1.263	1.435	1.370	1.351	1.555	1.550
August	2.037	1.618	1.435	1.898	1.387	1.248	1.437	1.364	1.359	1.548	1.534
September	2.037	1.618	1.385	1.799	1.412	1.248	1.418	1.372	1.357	1.546	1.531
October	2.132	1.653	1.374	1.818	1.406	1.245	1.414	1.376	1.357	1.560	1.553
November	2.141	1.650	1.401	1.855	1.401	1.256	1.414	1.381	1.357	1.570	1.565
December	2.268	1.715	1.437	1.887	1.443	1.259	1.412	1.383	1.359	1.577	1.597
1933:											
January	2.347	1.792	1.451	1.927	1.515	1.279	1.427	1.397	1.372	1.634	1.639
February	2.445	1.862	1.471	1.953	1.572	1.292	1.433	1.403	1.383	1.689	1.672
March	2.336	1.832	1.468	1.949	1.590	1.295	1.422	1.404	1.385	1.698	1.661
April	2.247	1.783	1.441	1.931	1.626	1.300	1.425	1.401	1.399	1.730	1.656
May	1.992	1.684	1.300	1.789	1.656	1.287	1.401	1.366	1.395	1.698	1.595
June	1.880	1.634	1.214	1.626	1.626	1.261	1.339	1.357	1.362	1.645	1.538
July	1.664	1.527	1.159	1.471	1.531	1.241	1.258	1.366	1.337	1.563	1.451
August	1.736	1.543	1.091	1.340	1.527	1.232	1.230	1.368	1.289	1.529	1.439
September	1.754	1.541	1.083	1.300	1.420	1.218	1.209	1.376	1.261	1.536	1.412
October	1.795	1.558	1.124	1.297	1.359	1.205	1.192	1.376	1.232	1.531	1.404
November	1.767	1.555	1.334	1.302	1.361	1.209	1.178	1.362	1.235	1.527	1.406
December	1.802	1.600	1.121	1.309	1.362	1.198	1.168	1.357	1.235	1.522	1.412

Processing Taxes and the Price Index

THE Agricultural Adjustment Act provided that "to obtain revenue for extraordinary expenses incurred by reason of the national economic emergency, there shall be levied processing taxes * * *."[1] In accordance with this act, the Secretary of Agriculture established a processing tax of 30 cents a bushel on wheat, effective July 10, 1933. There was also declared, effective August 1, 1933, a processing tax of 4.2 cents per pound on cotton. On September 14, the Secretary of Agriculture announced a processing tax, effective October 1, on leaf tobacco of 1.7 cents per pound for Maryland tobacco and 3 cents per pound for tobacco from other States.

The corn-hog ratio was declared effective as of November 5. The tax on corn is announced as 5 cents per bushel of 56 pounds. For hogs, the following taxes have been announced: Effective November 5, 50 cents per 100 pounds live weight; December 1, $1 per hundredweight. These taxes are still in effect.

In all cases these taxes are to be collected by the Bureau of Internal Revenue on "the first domestic processing" of each raw material. No tax is to be paid by the purchaser of the raw materials when such materials are to be used by the farmer for purposes of feeding or otherwise. The tax is to be paid by the purchaser of the raw materials when such materials are to be processed or converted into other items for further sale.

As considerable portions of these raw materials are not purchased for processing it is not justifiable to include these taxes in regular market quotations. The index number of the Bureau of Labor Statistics, showing the general trend of wholesale commodity prices, represents market prices, and therefore prices used in the calculation of these indexes for articles subject to the processing tax do not include such taxes.

In order that the effect of processing taxes on the index numbers of the Bureau of Labor Statistics may be shown, there has been calculated a series of wholesale price indexes for the major groups and subgroups of farm products, including the articles upon which taxes have been assessed, for the period during which they have been effective. The following tabular statement shows the comparison of the regular series of index numbers of the Bureau for farm products with the indexes based upon prices including processing taxes:

[1] Pt. 2, sec. 9, par. *a*, H.R. 3835, approved May 12, 1933.

INDEX NUMBERS OF WHOLESALE PRICES OF FARM PRODUCTS WITH AND WITHOUT PROCESSING TAXES

[1926=100]

Month	Grains		Livestock and poultry		Other farm products		All farm products	
	Without tax	With tax	Without tax	With tax	Without tax	With tax	Without tax	With tax
July	73.4	83.2	----------	----------	----------	----------	60.1	61.7
August	64.6	77.5	----------	----------	62.5	67.7	57.6	62.5
September	63.9	76.8	----------	----------	61.2	66.8	57.0	62.1
October	58.2	71.1	----------	----------	61.2	67.5	55.7	61.2
November	61.3	75.4	41.2	43.0	64.3	70.6	56.6	62.8
December	60.4	74.8	38.0	42.2	64.3	70.6	55.5	62.5

It will be seen from the above that the index numbers of the individual groups of farm products have been affected by the processing tax. The index number for grains for December, excluding the tax on wheat, was 60.4 as compared with 74.8 when the tax was included, showing a differential of 24 percent between the two figures. The index number for other farm products for the same month, excluding the tax on cotton and tobacco, was 64.3. Including these taxes, the index is 70.6. The differential between the two series was nearly 10 percent. Including the corn-hog ratio the index number of livestock and poultry for the month was 42.2, and excluding the corn-hog ratio the index was 38, showing a differential of over 11 percent. For all farm products for the month of December the index number of the regular series is 55.5 as compared with 62.5 with all taxes added, showing a differential of about 13 percent between the two indexes.

Trend of Wholesale Prices During December 1933

WHOLESALE commodity prices during December dropped one half of 1 percent, according to an announcement made by the Bureau of Labor Statistics of the United States Department of Labor. The index number for the month receded to 70.8 percent of the 1926 average as compared with 71.1 percent for November.

Between November and December decreases in prices were reported for 179 items, increases for 170, while in 435 instances no change took place. Although price declines were reported for only one fifth of the commodities covered and affected only 4 of the 10 major groups, these decreases were sufficiently large to offset the advances in other commodities and thus cause the total index to move downward for the second consecutive month. Of the 179 items showing decreases in prices, more than 90 of them were farm products and manufactured foods. Among the important price declines which were largely responsible for the drop in the index were a 19-percent decrease for

hogs, 16-percent fall for eggs, 14-percent drop for butter and cheese, 13 percent for lard, 4 percent for meats, 3 percent for sugar, 3 percent for flour, and minor declines in certain textile and fuel items.

For the seventh consecutive month current prices average higher than those in the corresponding month in the year before.

The index shows an increase of more than 13 percent over prices of December 1932 when the index was 62.6. The average is 18 percent higher than for the month of February 1933 when prices had reached their low point with an index of 59.8. As compared with June 1929 when the index stood at 95.2, prices last month were lower by more than 25 percent.

The largest decrease was shown for the group of manufactured foods, which fell by nearly 3 percent during the month. The index for the group is 16.5 percent above February, the low point reached during the year, and more than 7 percent higher than December of a year ago. Among the food items which showed price decreases were butter, cheese, flour, macaroni, cured and fresh beef, fresh and cured pork, sugar, lard, oleomargarine, and cottonseed oil. Higher prices were reported for rice, lamb, mutton, mess pork, and coffee.

Wholesale prices of farm products showed the second largest price decrease, the group as a whole declining by nearly 2 percent. The index for the group is 36 percent above February and about 26 percent higher than the corresponding month of last year and within 7.5 percent of the high point reached in July of the present year. Price decreases in this group were reported for barley, rye, wheat, cows, hogs, eggs, oranges, hops, and onions. Advances were shown for corn, oats, steers, live poultry, fresh apples, hay, tobacco, peanuts, potatoes, and wool.

Weakening market prices for cotton textiles, knit goods, silk and rayon, and woolen goods caused the textile products group as a whole to decrease one half of 1 percent during December. Declines took place in prices for coal and gas, while prices for electricity and coke advanced, with the petroleum products subgroup remaining at the November level. The fuel and lighting materials group as a whole declined only fractionally.

The hides and leather group with an advance of over 1 percent showed the greatest increase of any of the 10 major groups of commodities. In this group, leather and hide and skin prices showed a decided market strengthening, while boots and shoes and other leather products declined fractionally.

The group of metals and metal products showed the second largest advance and increased by 1 percent. The rise was due to increasing prices of certain agricultural implements and iron and steel items. The index for motor vehicles was unchanged, while the average of nonferrous metals and plumbing and heating fixtures declined.

WHOLESALE PRICES of SELECTED GROUPS
1926 = 100
U.S. Department of Labor
BUREAU OF LABOR STATISTICS
Washington
Index Numbers
125
100
75
50
25
0
1926
1927
1928
1929
1930
1931
1932
1933
1934
1935
Farm Products
Non-Agricultural
Commodities less Farm & Food
All Commodities

The building-materials group also registered a price advance. This group increased by nearly 1 percent during the month. Brick and tile, lumber, paint and paint materials, and other building materials shared in the upward movement. Cement and structural steel remained at the same level as for November.

The group of chemicals and drugs and the miscellaneous-commodities group showed increases of less than one half of 1 percent. The rise in the chemical group was due to a general strengthening of the more important commodities included under this classification. This was particularly true of anilin oil, aluminum sulphate, and sodium compounds. Higher prices for crude rubber and Pennsylvania cylinder oil were, in the main, responsible for the increase for the miscellaneous group. No change in the general average of prices between the 2 months was reported for the house-furnishing goods group.

Raw materials including basic farm products, pig tin, raw silk, pig lead, crude rubber, and similar articles showed a decrease of nearly 1 percent during the month. The present index, however, averaged more than 18 percent higher than December a year ago. This group was 28 percent higher in December than in February when the low point was reached. Semimanufactured articles including such items as leather, yarns, iron and steel bars, wood pulp, and similar commodities advanced more than 1 percent to a level of 25 percent above a year ago and have risen by 28 percent above the February average.

Prices of finished products, which include a list of over 500 fully manufactured articles moved downward about one half of 1 percent to a point fractionally more than 9 percent over last December and to a level of 14 percent above the low point reached in February.

The nonagricultural-commodities group which includes all commodities except farm products, declined one fourth of 1 percent within the month. The group now stands 11 percent over a year ago and 16 percent over the level for the month of February.

The combined index for all products, exclusive of farm products and processed foods, advanced one half of 1 percent between November and December. It showed an increase of more than 12 percent over last December and 17 percent over the low point reached in February.

The index number which includes 784 commodities or price series weighted according to their relative importance in the markets are based on average prices for the year 1926.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS OF COMMODITIES

[1926=100.0]

Groups and subgroups	Index numbers			Purchasing power of dollar December 1933
	December 1933	November 1933	December 1932	
All commodities	70.8	71.1	62.6	$1.412
Farm products	55.5	56.6	44.1	1.802
Grains	60.4	61.3	31.7	1.656
Livestock and poultry	38.0	41.2	38.7	2.632
Other farm products	64.3	64.3	51.3	1.555
Foods	62.5	64.3	58.3	1.600
Butter, cheese, and milk	65.1	67.2	59.5	1.536
Cereal products	84.7	85.8	61.7	1.181
Fruits and vegetables	63.0	61.7	52.8	1.587
Meats	46.0	48.2	49.4	2.174
Other foods	63.4	66.4	66.1	1.577
Hides and leather products	89.2	88.2	69.6	1.121
Boots and shoes	98.6	99.0	83.8	1.014
Hides and skins	74.9	70.1	41.7	1.335
Leather	80.1	79.3	59.2	1.248
Other leather products	87.6	87.9	81.9	1.142
Textile products	76.4	76.8	53.0	1.309
Clothing	87.9	88.0	62.5	1.138
Cotton goods	85.5	86.0	51.7	1.170
Knit goods	71.2	72.5	49.3	1.404
Silk and rayon	29.6	30.4	29.3	3.378
Woolen and worsted goods	84.3	84.4	54.2	1.186
Other textile products	75.9	75.8	66.6	1.318
Fuel and lighting materials	73.4	73.5	69.3	1.362
Anthracite	81.5	81.8	88.7	1.227
Bituminous coal	90.6	90.7	80.2	1.104
Coke	83.6	83.2	75.3	1.196
Electricity	[1]	93.8	104.1	.....
Gas	[1]	94.6	96.5	.....
Petroleum products	51.6	51.6	45.0	1.938
Metals and metal products	83.5	82.7	79.4	1.198
Agricultural implements	85.1	83.7	84.5	1.175
Iron and steel	83.6	81.5	78.8	1.196
Motor vehicles	90.9	90.9	93.0	1.100
Nonferrous metals	66.6	68.0	48.3	1.502
Plumbing and heating	72.5	73.7	67.5	1.379
Building materials	85.6	84.9	70.8	1.168
Brick and tile	85.7	84.7	75.1	1.167
Cement	91.2	91.2	81.1	1.096
Lumber	88.0	86.5	56.5	1.136
Paint and paint materials	77.5	76.3	68.1	1.290
Plumbing and heating	72.5	73.7	67.5	1.379
Structural steel	86.8	86.8	81.7	1.152
Other building materials	88.6	88.4	80.1	1.129
Chemicals and drugs	73.7	73.4	72.3	1.357
Chemicals	79.2	79.2	79.7	1.263
Drugs and pharmaceuticals	59.0	58.4	54.7	1.695
Fertilizer materials	68.1	67.8	63.1	1.468
Mixed fertilizers	69.9	68.5	65.6	1.431
Housefurnishing goods	81.0	81.0	73.6	1.235
Furnishings	82.9	82.8	74.7	1.206
Furniture	79.3	79.4	72.7	1.261
Miscellaneous	65.7	65.5	63.4	1.522
Automobile tires and tubes	43.2	43.2	44.6	2.315
Cattle feed	60.3	63.5	37.1	1.658
Paper and pulp	82.5	82.5	73.0	1.212
Rubber, crude	18.0	17.5	6.8	5.556
Other miscellaneous	79.0	78.4	81.3	1.266
Raw materials	61.9	62.4	52.1	1.616
Semimanufactured articles	72.3	71.4	57.7	1.383
Finished products	74.8	75.2	68.4	1.337
Nonagricultural commodities	74.0	74.2	66.5	1.351
All commodities other than farm products and foods	77.5	77.2	69.0	1.290

[1] Data not yet available.

Movement on Wholesale Prices During 1933

AN INCREASE in the general level of wholesale prices took place in 1933. Except for a slight shading off during November and December, the trend was steadily upward, beginning with March. The net increase from the low of February to the high reached in October was 19 percent. The average for the year 1933 was more than 1.5 percent above the average for the year 1932.

Sharp advances took place in prices of grain during the year. Livestock and poultry also showed an increase in prices during the summer and fall but fell off sharply in December to within one half of 1 percent of the low for January. Other farm products including cotton, hay, hops, seeds, potatoes, and wool also increased. The advance in the group as a whole within the year was 30 percent, while the level of farm products for 1933 was 6.5 percent above the average of the preceding year. Foods declined in prices during January and February, rose steadily from March to September, and reacted again for the remaining 3 months of the year. The December average was 3 percent above that for January, while the level for the year was 1 percent below that of the year 1932.

Prices of hides and leather products showed wide variations during the year with the result that from the low of February to the high of September, an increase of 36 percent was recorded. An increase of 11 percent was also shown from 1932 to 1933.

Textile products including clothing, cotton goods, silk and rayon, and woolen and worsted goods moved steadily upward from the low reached in February until the high of October, then receded slightly during November and December. An increase of 18 percent was recorded over the previous year.

Fuel and lighting materials receded steadily for the first part of the year. From June to October there was a strengthening in average prices with a slight reaction occurring for November and December. This group with an average decline of 5.5 percent shows the largest decrease of the 10 major groups when compared with the level of the year before, due mainly to declining prices of anthracite, gasoline, and crude petroleum. However, the index for December 1933 was nearly 6 percent above the index for December 1932. Fluctuations in the group of metals and metal products were not so radical as in most of the other groups. The low point was reached in April and the high in December. An increase of 5 percent was recorded for December when compared with December of the previous year. The average for the year was less than 1 percent under the year before.

Average prices of building materials did not show the weakening during the closing months of 1933 that was recorded for other commodities. Following minor changes during the first 4 months, prices maintained a steady rise to the end of the year, with the index for December up 21 percent over last December and higher than any month since October 1930. Average prices for the year were 8 percent higher than in 1933.

Contrasted with an average increase of 1 percent for house-furnishing goods, the chemicals and drugs group registered a slight decrease between the 2 years. The group of miscellaneous commodities, including crude rubber, automobile tires, cattle feed, and paper and pulp also showed a decrease between 1932 and 1933, amounting to nearly 3 percent, although an increase of 3.5 percent was shown between the two Decembers.

Five of ten major groups of commodities averaged higher in 1933 than in 1932, ranging from 18 percent in the case of textiles to 1 percent for house-furnishing goods. The 5 groups which decreased during the year period ranged from 5.5 percent for fuel and lighting materials to 1 percent for foods.

Index numbers by groups and subgroups of commodities for the years 1926 to 1933, inclusive, are contained in the following table.

INDEX NUMBERS OF WHOLESALE PRICES BY GROUPS AND SUBGROUPS

(1926=100)

Groups and subgroups	1926	1927	1928	1929	1930	1931	1932	1933
All commodities	100.0	95.4	96.7	95.3	86.4	73.0	64.8	65.9
Farm products	100.0	99.4	105.9	104.9	88.3	64.8	48.2	51.4
Grains	100.0	100.9	107.3	97.4	78.3	53.0	39.4	53.1
Livestock and poultry	100.0	98.9	105.4	106.1	89.2	63.9	48.2	43.4
Other farm products	100.0	99.2	105.8	106.6	91.1	69.2	51.4	55.8
Foods	100.0	96.7	101.0	99.9	90.5	74.6	61.0	60.5
Butter, cheese, and milk	100.0	103.9	105.5	105.6	95.5	81.8	61.3	60.7
Cereal products	100.0	94.4	93.6	88.0	81.5	73.1	66.4	75.0
Fruits and vegetables	100.0	96.7	96.5	97.8	96.6	72.4	58.0	61.7
Meats	100.0	92.7	107.0	109.1	98.4	75.4	58.2	50.0
Other foods	100.0	98.0	97.6	93.9	80.9	69.8	60.7	61.1
Hides and leather products	100.0	107.7	121.4	109.1	100.0	86.1	72.9	80.9
Boots and shoes	100.0	102.6	109.9	106.3	102.0	93.7	86.1	90.2
Hides and skins	100.0	120.3	148.6	112.7	91.0	60.2	42.1	67.1
Leather	100.0	109.2	126.3	113.2	101.3	86.2	65.1	71.4
Other leather products	100.0	102.8	108.2	106.4	105.5	101.4	90.1	81.1
Textile products	100.0	95.6	95.5	90.4	80.3	66.3	54.9	64.8
Clothing	100.0	95.8	93.2	90.0	86.2	75.9	63.0	72.2
Cotton goods	100.0	97.1	100.4	98.8	84.7	66.1	54.0	71.2
Knit goods	100.0	91.9	90.1	88.5	80.0	60.9	51.6	58.9
Silk and rayon	100.0	87.1	83.7	80.4	60.2	43.5	31.0	30.6
Woolen and worsted goods	100.0	97.8	100.1	88.3	79.0	68.2	57.7	69.3
Other textile products	100.0	98.2	95.4	93.1	84.2	75.1	67.9	72.5
Fuel and lighting materials	100.0	88.3	84.3	83.0	78.5	67.5	70.3	66.3
Anthracite	100.0	96.3	91.7	90.1	89.1	91.1	88.4	82.2
Bituminous coal	100.0	100.3	93.6	91.3	89.4	84.6	82.0	82.8
Coke	100.0	94.4	84.6	84.6	84.0	82.4	77.7	77.9
Electricity	100.0	102.9	96.6	94.5	97.7	98.8	104.7	(1)
Gas	100.0	98.0	94.9	93.1	97.3	98.7	101.3	(1)
Petroleum products	100.0	72.7	72.0	71.3	61.5	39.5	45.4	41.0
Metals and metal products	100.0	96.3	97.0	100.5	92.1	84.5	80.2	79.8
Agricultural implements	100.0	99.7	99.3	98.7	95.0	92.1	84.9	83.5
Iron and steel	100.0	94.2	93.5	94.9	89.1	83.3	79.4	78.6
Motor vehicles	100.0	100.4	102.9	106.7	100.3	94.8	94.1	90.2
Nonferrous metals	100.0	92.8	94.0	106.1	82.4	61.9	49.8	59.6
Plumbing and heating	100.0	92.0	95.1	95.0	88.6	84.7	66.8	67.1
Building materials	100.0	94.7	94.1	95.4	89.9	79.2	71.4	77.0
Brick and tile	100.0	95.7	95.6	94.3	89.8	83.6	77.3	79.2
Cement	100.0	96.7	95.9	91.8	91.8	79.4	77.2	86.1
Lumber	100.0	93.1	90.5	93.8	85.8	69.5	58.5	70.7
Paint and paint materials	100.0	96.3	93.1	94.9	90.5	79.4	71.1	73.3
Plumbing and heating	100.0	92.0	95.1	95.0	88.6	84.7	66.8	67.1
Structural steel	100.0	94.7	95.2	98.1	87.3	83.1	80.9	83.1
Other building materials	100.0	95.4	96.7	97.7	93.3	84.8	79.5	82.7
Chemicals and drugs	100.0	96.8	95.6	94.2	89.1	79 3	73.5	72.6
Chemicals	100.0	99.6	100.5	99.1	93.7	83.0	79.5	79.6
Drugs and pharmaceuticals	100.0	88.4	72.6	71.5	68.0	62.8	57.7	56.3
Fertilizer materials	100.0	96.2	94.6	92.1	85.6	76.8	66.9	65.9
Mixed fertilizers	100.0	93.0	97.3	97.2	93.6	82.0	69.3	64.5
House-furnishing goods	100.0	97.5	95.1	94.3	92.7	84.9	75.1	75.8
Furnishings	100.0	97.4	93.7	93.6	91.4	82.2	75.4	76.6
Furniture	100.0	97.7	96.7	95.0	94.0	88.0	75.0	75.1
Miscellaneous	100.0	91.0	85.4	82.6	77.7	69.8	64.4	62.5
Automobile tires and tubes	100.0	74.9	63.4	54.5	51.3	46.0	41.1	42.1
Cattle feed	100.0	117.8	138.1	121.6	99.7	62.7	46.0	57.9
Paper and pulp	100.0	93.8	91.4	88.9	86.1	81.4	75.5	76.6
Rubber, crude	100.0	77.9	46.4	42.3	24.5	12.8	7.3	12.2
Other miscellaneous	100.0	98.8	96.9	98.4	95.5	88.0	83.7	76.2
Raw materials	100.0	96.5	99.1	97.5	84.3	65.6	55.1	56.5
Semimanufactured articles	100.0	94.3	94.5	93.9	81.8	69.0	59.3	65.4
Finished products	100.0	95.0	95.9	94.5	88.0	77.0	70.3	70.5
Nonagricultural commodities	100.0	94.6	94.8	93.3	85.9	74.6	68.3	69.0
All commodities other than farm products and foods	100.0	94.0	92.9	91.6	85.2	75.0	70.2	71.2

[1] Data not yet available.

COST OF LIVING

Changes in Cost of Living in the United States, December 1933

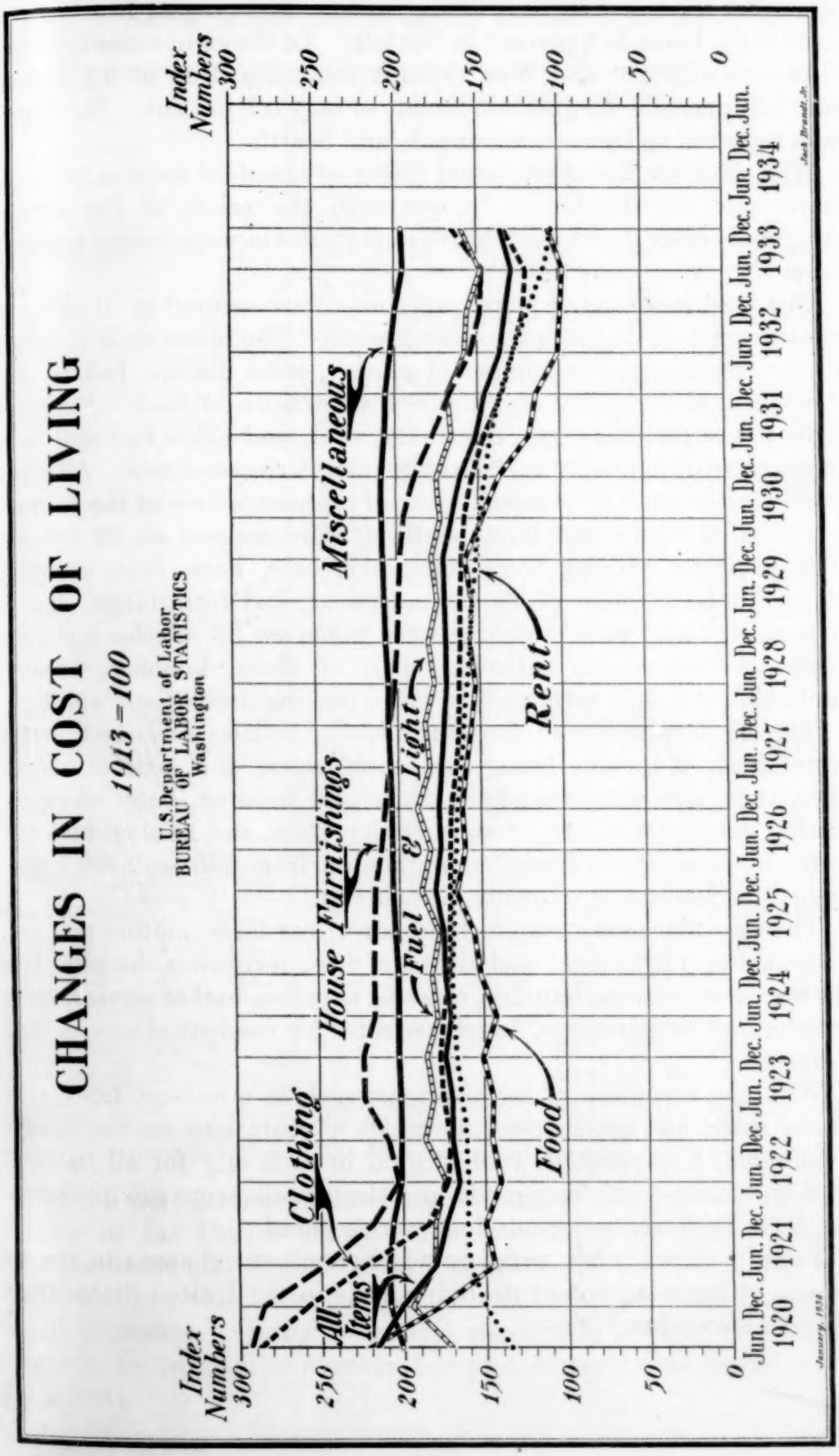
THE December 1933 cost-of-living index number for the United States, as computed by the Bureau of Labor Statistics of the United States Department of Labor is 135, based on 1913 as 100. This means that the total cost of living is still 35 percent higher than in 1913. The survey was made by the Bureau in 32 cities, the figures applying to wage earners and lower-salaried workers.

As a whole the cost of living increased 5.2 percent between June 1933 and December 1933. Food increased 9.1 percent; clothing, 11.5 percent; fuel and light, 7.2 percent; house-furnishing goods, 11.6 percent; and miscellaneous items, 0.7 percent. Rents decreased 4.3 percent.

Comparing December 1932 and December 1933, the wage earners' cost of living increased 2.2 percent. Food increased 6.9 percent during the year; clothing, 10 percent; fuel and light, 1.5 percent; and house-furnishing goods, 11.8 percent. Rents declined 11.8 percent and miscellaneous items showed a decrease of 1.7 percent.

Between the peak period of June 1920 and December 1933, the cost of living decreased 37.6 percent. The percentage declines of the group items were food, 51.8 percent; clothing, 53.5; rents, 22.8; fuel and light, 7.3; house-furnishing goods, 43.7; and miscellaneous items, 2.7.

During the 6-month period ending December 1933, food increased in all cities, the increases ranging from 1.7 percent in Seattle to 14.8 percent in Norfolk. Increases were reported for clothing in the 32 cities covered with Cincinnati showing the smallest increase of 7.3 percent and San Francisco the greatest of 15.9 percent. Rents decreased in all of the 32 cities, the declines running from 1.3 percent in Houston to 7.8 percent in Richmond. With the exception of Los Angeles, which showed a decrease of 3 percent, fuel and light increased in all cities included in the survey. The advances for the group ranged from 0.6 percent in San Francisco to 17.5 percent in New Orleans. Jacksonville with a rise of 19.2 percent showed the greatest advance in house-furnishing goods with all other cities reporting increases ranging downward to 6.8 percent in Portland, Maine. Twenty-one of the thirty-two cities covered showed higher


CHANGES IN COST OF LIVING
1913 = 100
U.S. Department of Labor
BUREAU OF LABOR STATISTICS
Washington
Index Numbers
300
250
200
150
100
50
0
All Items
Clothing
House Furnishings
Fuel & Light
Miscellaneous
Rent
Food
Jun. Dec. Jun. Dec. Jun. Dec. Jun. Dec. Jun. Dec. Jun. Dec. Jun. Dec. Jun. Dec. Jun. Dec. Jun. Dec. Jun. Dec. Jun. Dec. Jun. Dec. Jun.
1920 1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931 1932 1933 1934
January, 1934
Jack Brandt, Jr.

prices for the miscellaneous items, the increases ranging from 0.2 percent in St. Louis to 4 percent in Norfolk. Of the eight cities reporting decreases Chicago and New Orleans showed a drop of 0.1 percent and Minneapolis the greatest decline of only 0.7 percent. No change was reported in Denver, Savannah, and Seattle.

The data are based on actual prices of standard articles of major importance in the family budget with the prices of the articles weighted according to the relative importance in wage-earner expenditure.

For food items retail price quotations were secured in 51 cities as contrasted with 32 cities for other groups. The prices were obtained from a representative number of grocers, meat dealers, bakers, and dairymen in each city and covered 42 articles of food. Fuel and light prices including gas, electricity, coal, and other fuel and light items were obtained by mail from regular correspondents. All other data were secured by personal visits of representatives of the Bureau.

Prices of men's and boys' clothing were secured on 32 articles. The principal articles were suits, overcoats, hats, caps, overalls, shoes, rubbers, repair of shoes, underwear, and furnishings. Prices of women's and girls' clothing were taken on 38 articles including coats, dresses, shoes, rubbers, repair of shoes, kimonos, hosiery, underclothing, and yard goods used in making dresses and aprons.

The 28 furniture and house-furnishing articles on which prices were obtained include livingroom, diningroom, and bedroom furniture, rugs, linoleum, household linens and bedding, baby carriages, sewing machines, stoves, brooms, refrigerators, and kitchen tables.

Real-estate agents furnished rentals on from 500 to 2,500 unfurnished houses and apartments in each city.

The miscellaneous group includes street-car fares, motion pictures, newspapers, physicians' and dentists' fees, medicines, hospital fees for wards, spectacles, laundry, cleaning supplies, barber service, toilet articles and preparations, telephone rates for residential service, and tobacco.

With the exception of certain items such as street-car fares, telephone rates, and newspapers, for which 4 quotations are not always obtainable, 4 quotations were secured in each city for all items of clothing, house-furnishing goods, and the miscellaneous group, excepting New York where 5 quotations were secured.

Table 1 shows index numbers which represent changes in the six groups of items entering into living costs in the United States from 1913 to December 1933.

TABLE 1.—INDEX NUMBERS OF COST OF LIVING FOR WAGE EARNERS AND LOW SALARIED WORKERS IN THE UNITED STATES, BY GROUPS OF ITEMS, 1913 TO DECEMBER 1933

Date	Index numbers (1913=100)						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Average, 1913	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
December 1914	105.0	101.0	100.0	101.0	104.0	103.0	103.0
December 1915	105.0	104.7	101.5	101.0	110.6	107.4	105.1
December 1916	126.0	120.0	102.3	108.4	127.8	113.3	118.3
December 1917	157.0	149.1	100.1	124.1	150.6	140.5	142.4
December 1918	187.0	205.3	109.2	147.9	213.6	165.8	174.4
June 1919	184.0	214.5	114.2	145.6	225.1	173.2	177.3
December 1919	197.0	268.7	125.3	156.8	263.5	190.2	199.3
June 1920	219.0	287.5	134.9	171.9	292.7	201.4	216.5
December 1920	178.0	258.5	151.1	194.9	285.4	208.2	200.4
May 1921	144.7	222.6	159.0	181.6	247.7	208.8	180.4
September 1921	153.1	192.1	160.0	180.9	224.7	207.8	177.3
December 1921	149.9	184.4	161.4	181.1	218.0	206.8	174.3
March 1922	138.7	175.5	160.9	175.8	206.2	203.3	166.9
June 1922	140.7	172.3	160.9	174.2	202.9	201.5	166.4
September 1922	139.7	171.3	161.1	183.6	202.9	201.1	166.3
December 1922	146.6	171.5	161.9	186.4	208.2	200.5	169.5
March 1923	141.9	174.4	162.4	186.2	217.6	200.3	168.8
June 1923	144.3	174.9	163.4	180.6	222.2	200.3	169.7
September 1923	149.3	176.5	164.4	181.3	222.4	201.1	172.1
December 1923	150.3	176.3	166.5	184.0	222.4	201.7	173.2
March 1924	143.7	175.8	167.0	182.2	221.3	201.1	170.4
June 1924	142.4	174.2	168.0	177.3	216.0	201.1	169.1
September 1924	146.8	172.3	168.0	179.1	214.9	201.1	170.6
December 1924	151.5	171.3	168.2	180.5	216.0	201.7	172.5
June 1925	155.0	170.6	167.4	176.5	214.3	202.7	173.5
December 1925	165.5	169.4	167.1	186.9	214.3	203.5	177.9
June 1926	159.7	168.2	165.4	180.7	210.4	203.3	174.8
December 1926	161.8	166.7	164.2	188.3	207.7	203.9	175.6
June 1927	158.5	164.9	162.1	180.8	205.2	204.5	173.4
December 1927	155.9	162.9	160.2	183.2	204.6	205.1	172.0
June 1928	152.6	162.6	157.6	177.2	201.1	205.5	170.0
December 1928	155.8	161.9	155.9	181.3	199.7	207.1	171.3
June 1929	154.8	161.3	153.7	175.2	198.5	207.3	170.2
December 1929	158.0	160.5	151.9	178.7	197.7	207.9	171.4
June 1930	147.9	158.9	149.6	172.8	195.7	208.5	166.6
December 1930	137.2	153.0	146.5	175.0	188.3	208.1	160.7
June 1931	118.3	146.0	142.0	165.4	177.0	206.6	150.3
December 1931	114.3	135.5	136.2	168.0	167.1	205.4	145.8
June 1932	100.1	127.8	127.8	157.1	153.4	202.1	135.7
December 1932	98.7	121.5	118.0	156.9	147.4	199.3	132.1
June 1933	96.7	119.8	108.8	148.4	147.7	194.5	128.3
December 1933	105.5	133.6	104.1	159.3	164.8	195.9	135.0

Table 2 shows the percent of change in cost of living in each of the 32 cities in the United States from June 1920, December 1929, December 1932, and June 1933 to December 1933.

Between June 1920, the peak period, and December 1933 all cities showed decreases, ranging from 32.6 percent in Scranton to 45.5 percent in Detroit. The average decline for the United States was 37.6 percent.

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In the period from December 1929 to December 1933 the average decrease for the United States was 21.2 percent. The drop in the cities was from 17.3 percent in Washington to 27.6 percent in Detroit.

For the year period from December 1932 to December 1933, the trend of the cost of living was not the same in all cities. Increases were shown for 28 cities and averaged from 0.1 percent in Pittsburgh to 5.1 percent in Houston. Los Angeles and Portland, Oreg., each reported a decrease of 0.2 percent and Minneapolis decreased 0.1 percent. Kansas City showed no change. For the United States as a whole there was an average increase of 2.2 percent.

Comparing changes during the recent 6-month period from June 1933 to December 1933 each of the 32 cities showed an increase. The average rise for the United States was 5.2 percent. Norfolk, with an increase of 8 percent, recorded the greatest rise. Seattle, where the cost of living advanced by 2 percent, registered the smallest increase.

TABLE 2.—PERCENT OF CHANGE IN COST OF LIVING IN SPECIFIED CITIES FROM JUNE 1920, DECEMBER 1929, DECEMBER 1932, AND JUNE 1933 TO DECEMBER 1933

City	Percent of decrease from—		Percent of increase from—		City	Percent of decrease from—		Percent of increase from—	
	June 1920 to December 1933	December 1929 to December 1933	December 1932 to December 1933	June 1933 to December 1933		June 1920 to December 1933	December 1929 to December 1933	December 1932 to December 1933	June 1933 to December 1933
Atlanta	40.6	23.3	3.0	5.2	New Orleans	33.6	20.7	1.5	5.1
Baltimore	33.8	19.0	2.8	6.0	New York	35.2	19.8	1.4	4.9
Birmingham	41.5	25.8	2.1	5.6	Norfolk	36.7	19.0	3.0	8.0
Boston	36.4	20.4	2.8	5.3	Philadelphia	35.3	21.0	3.2	6.2
Buffalo	35.9	21.1	1.6	4.8	Pittsburgh	36.8	23.5	.1	4.5
Chicago	40.0	25.9	.4	3.8	Portland, Maine	34.2	17.6	3.3	6.0
Cincinnati	34.5	21.8	.8	4.1	Portland, Oreg	40.2	21.0	[2].2	3.7
Cleveland	36.7	20.0	1.9	3.9	Richmond	34.9	18.5	3.5	6.5
Denver	38.7	20.6	.5	3.0	St. Louis	37.1	23.0	1.2	3.7
Detroit	45.5	27.6	2.4	6.4	San Francisco	32.9	18.2	2.1	4.9
Houston	39.1	23.0	5.1	5.6	Savannah	39.7	19.7	3.5	6.4
Indianapolis	38.6	22.4	1.9	4.7	Scranton	32.6	19.8	2.6	6.5
Jacksonville	38.7	19.9	4.1	7.4	Seattle	35.8	19.9	1.0	2.0
Kansas City	40.7	19.9	[1]	2.5	Washington	34.6	17.3	4.6	6.5
Los Angeles	34.6	21.8	[2].2	4.9					
Memphis	36.9	20.7	3.1	5.0	Average, United States	37.6	21.2	2.2	5.2
Minneapolis	35.6	20.5	[2].1	5.2					
Mobile	37.3	21.2	3.1	6.3					

[1] No change. [2] Decrease.

For 19 cities data are available back to December 1914 and for 13 cities back to December 1917. Sufficient additional data were collected to warrant an extension of the index for the United States back to 1913 but not for the individual cities.

The percentage of changes in the cost of living and for the six groups of items from December 1914 to December 1933 and specified intervening dates for 19 cities are shown in table 3.

Index numbers for the other dates specified in table 1 are available for these cities but are omitted as a matter of economy in printing.

TABLE 3.—CHANGES IN COST OF LIVING IN 19 CITIES, JUNE 1920 TO DECEMBER 1933

City and date	Percent of increase over December 1914 in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Baltimore, Md.:							
June 1920	110.9	191.3	41.6	57.6	191.8	111.4	114.3
December 1920	75.6	159.5	49.5	79.0	181.9	112.9	96.8
June 1928	52.9	68.1	66.7	82.0	103.2	118.7	73.7
December 1928	51.9	68.3	65.7	87.3	102.0	120.9	73.9
June 1929	53.8	67.5	65.2	80.7	100.4	119.8	73.8
December 1929	56.7	67.2	63.4	86.1	99.4	120.2	75.1
June 1930	47.2	65.9	62.4	80.9	95.6	127.0	71.6
December 1930	36.9	58.1	61.3	85.6	86.0	126.5	65.8
June 1931	18.7	51.6	59.8	78.7	72.1	125.6	55.8
December 1931	14.4	41.9	56.3	83.9	66.8	124.5	51.8
June 1932	[1] 1.0	32.7	51.5	67.9	55.6	119.1	41.0
December 1932	[1] .4	26.5	37.9	75.1	48.0	117.1	38.1
June 1933	[1] 3.8	24.0	29.8	62.8	47.4	114.5	33.9
December 1933	7.8	39.0	24.5	75.7	64.5	115.1	41.9
Boston, Mass.:							
June 1920	105.0	211.1	16.2	83.6	233.7	91.8	110.7
December 1920	74.4	192.7	25.8	106.0	226.4	96.6	97.4
June 1928	45.0	80.2	52.2	90.4	123.1	90.2	64.8
December 1928	50.5	80.4	51.6	96.7	118.4	94.4	68.2
June 1929	47.1	79.0	50.7	87.7	118.4	92.1	65.4
December 1929	53.2	79.0	49.2	94.3	118.0	92.9	68.4
June 1930	43.7	78.3	47.1	88.7	113.6	92.5	63.1
December 1930	36.7	72.6	44.7	95.7	107.6	92.3	59.2
June 1931	14.6	66.7	41.8	85.3	97.4	92.3	47.1
December 1931	12.8	58.0	38.4	86.0	89.9	91.3	44.1
June 1932	[1] 4.8	49.5	35.1	70.7	72.6	87.9	32.6
December 1932	[1] 2.8	40.5	28.1	73.1	59.3	85.5	30.4
June 1933	[1] 6.2	39.7	21.7	64.6	62.6	84.0	27.3
December 1933	1.6	56.5	17.2	71.7	83.6	85.1	34.1
Buffalo, N.Y.:							
June 1920	115.7	210.6	46.6	69.8	199.7	101.9	121.5
December 1920	78.5	168.7	48.5	74.9	189.2	107.4	101.7
June 1928	51.6	71.7	72.7	126.7	105.4	117.8	78.7
December 1928	54.9	72.4	69.4	128.5	104.2	117.8	79.6
June 1929	54.6	71.2	67.0	123.2	104.4	118.9	78.8
December 1929	57.9	71.0	66.5	127.0	104.2	119.1	80.0
June 1930	47.2	70.0	65.0	122.9	105.0	120.4	76.0
December 1930	35.8	62.0	62.5	126.7	96.4	118.4	69.4
June 1931	16.0	52.3	56.5	121.3	84.0	116.4	58.3
December 1931	6.7	45.4	50.4	124.8	72.4	114.2	51.8
June 1932	1.3	37.0	39.7	113.8	56.9	110.8	44.7
December 1932	.5	25.6	29.4	117.4	51.9	106.4	39.8
June 1933	[1] 2.9	25.7	19.6	111.7	52.4	100.0	35.5
December 1933	6.5	39.9	14.7	119.5	67.8	100.6	42.0
Chicago, Ill.:							
June 1920	120.0	205.3	35.1	62.4	215.9	87.5	114.6
December 1920	70.5	158.6	48.9	83.5	205.8	96.5	93.3
June 1928	59.4	53.3	86.8	51.2	96.0	98.5	71.5
December 1928	62.4	52.1	83.6	56.5	97.2	101.7	73.1
June 1929	63.0	51.5	80.3	50.7	97.4	101.7	72.3
December 1929	67.3	49.2	77.2	56.7	97.0	102.9	73.7
June 1930	56.9	47.7	75.1	51.5	92.1	104.7	69.1
December 1930	45.6	37.2	71.1	54.8	82.7	104.5	62.2
June 1931	26.7	30.3	64.4	49.5	67.7	103.3	51.8
December 1931	23.1	19.5	56.5	52.5	57.8	98.6	46.2
June 1932	5.4	11.0	38.8	42.1	37.1	94.2	33.1
December 1932	[1] .3	7.6	24.9	44.1	34.6	93.0	28.2
June 1933	[1] .2	6.1	8.7	28.1	35.4	89.9	24.0
December 1933	6.5	17.0	2.1	41.0	50.0	89.7	28.7
Cleveland, Ohio:							
June 1920	118.7	185.1	47.3	90.3	186.5	117.9	120.3
December 1920	71.7	156.0	80.0	94.5	176.8	134.0	107.3
June 1928	50.6	65.7	61.8	161.3	90.2	118.1	76.3
December 1928	48.5	63.9	60.5	163.7	89.2	119.0	75.4
June 1929	50.6	63.9	59.5	160.5	89.4	117.9	75.7
December 1929	47.0	63.2	58.9	163.1	88.8	118.3	74.3
June 1930	42.0	61.6	56.4	160.2	87.7	125.3	73.3
December 1930	29.5	52.1	55.3	162.5	75.5	124.2	66.2
June 1931	9.6	41.8	48.6	158.0	64.4	118.6	54.4
December 1931	4.1	36.8	41.0	159.5	58.3	119.0	50.0
June 1932	[1] 6.4	30.2	29.9	156.4	41.6	121.2	42.7
December 1932	[1] 10.3	25.3	18.2	155.4	36.1	114.8	36.9
June 1933	[1] 10.1	24.3	6.1	150.3	39.6	111.8	34.3
December 1933	[1] .7	33.7	1.1	156.1	52.6	112.4	39.5

[1] Decrease.

TABLE 3.—CHANGES IN COST OF LIVING IN 19 CITIES, JUNE 1920 TO DECEMBER 1933—Con.

City and date	Percent of increase over December 1914 in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Detroit, Mich.:							
June 1920	132.0	208.8	68.8	74.9	206.7	141.3	136.0
December 1920	75.6	176.1	108.1	104.5	184.0	144.0	118.6
June 1928	53.5	64.3	79.1	73.2	81.4	128.8	76.4
December 1928	55.7	62.5	78.2	77.0	81.2	131.1	77.4
June 1929	59.2	62.5	77.3	72.8	81.2	130.4	78.1
December 1929	57.9	61.7	77.8	77.5	79.4	130.6	77.8
June 1930	47.6	59.6	73.2	67.2	76.7	131.1	72.3
December 1930	32.6	50.2	60.0	71.0	66.5	125.1	61.6
June 1931	14.7	44.0	45.4	61.4	58.8	123.7	50.4
December 1931	7.7	33.1	31.0	59.3	49.3	118.1	41.9
June 1932	[1] 7.7	26.8	17.8	46.2	32.7	116.1	30.9
December 1932	[1] 11.3	25.9	1.1	47.2	32.2	110.7	25.7
June 1933	[1] 8.8	21.0	[1] 11.3	37.3	31.0	100.8	21.0
December 1933	1.3	37.1	[1] 16.2	48.2	46.3	103.6	28.7
Houston, Tex.:							
June 1920	107.5	211.3	25.3	55.1	213.9	90.4	112.2
December 1920	83.2	187.0	35.1	74.2	208.2	103.9	104.0
June 1928	45.6	85.8	30.4	29.2	132.0	89.7	64.1
December 1928	51.4	86.4	30.1	33.6	131.1	89.3	66.4
June 1929	51.1	84.7	27.5	29.1	129.0	92.1	66.1
December 1929	55.8	84.1	27.1	31.8	129.5	92.5	68.0
June 1930	43.0	82.8	25.7	25.3	127.2	92.5	62.3
December 1930	32.8	65.6	23.8	24.0	113.8	92.3	54.7
June 1931	11.2	63.8	20.0	18.9	110.0	92.1	45.2
December 1931	9.5	52.5	12.3	16.8	99.1	92.9	41.1
June 1932	[1] 7.5	42.0	[1] 1.2	11.8	87.0	88.5	29.6
December 1932	[1] 10.5	30.4	[1] 11.1	5.9	75.0	83.2	23.0
June 1933	[1] 9.2	29.0	[1] 17.0	3.9	75.2	82.5	22.4
December 1933	1.0	43.4	[1] 18.1	6.5	92.2	82.1	29.3
Jacksonville, Fla.:							
June 1920	90.1	234.0	28.9	72.6	224.2	102.8	116.5
December 1920	65.6	209.3	34.1	92.6	222.3	105.6	106.2
June 1928	36.4	85.0	32.3	74.4	119.2	105.1	68.3
December 1928	40.0	84.6	27.4	78.9	119.6	105.1	69.1
June 1929	37.4	83.9	19.8	77.1	117.8	105.1	66.9
December 1929	40.8	82.4	13.2	75.0	113.9	101.0	65.8
June 1930	31.9	80.4	3.2	70.6	110.5	102.4	61.0
December 1930	28.4	71.9	[1] 1.5	66.3	103.3	101.0	56.9
June 1931	8.4	65.4	[1] 5.9	64.0	89.9	100.2	47.4
December 1931	1.4	49.7	[1] 9.7	61.0	81.7	97.6	40.5
June 1932	[1] 10.7	41.3	[1] 15.8	53.4	62.1	92.9	31.6
December 1932	[1] 12.5	35.2	[1] 20.7	49.6	55.6	88.1	27.6
June 1933	[1] 15.7	33.6	[1] 25.9	48.1	52.6	82.3	23.6
December 1933	[1] 4.3	50.8	[1] 27.5	53.6	81.9	84.7	32.8
Los Angeles, Calif.:							
June 1920	90.8	184.5	42.6	53.5	202.2	86.6	101.7
December 1920	62.7	166.6	71.4	53.5	202.2	100.6	96.7
June 1928	34.9	71.4	54.1	56.5	110.7	107.2	67.4
December 1928	44.7	70.5	49.8	51.5	108.4	110.9	71.0
June 1929	41.2	69.3	45.2	50.6	106.5	111.1	68.9
December 1929	40.9	69.3	43.7	51.4	105.9	111.7	68.7
June 1930	30.9	68.1	39.8	45.6	103.6	110.2	63.7
December 1930	21.0	60.2	36.9	47.6	93.0	110.2	58.1
June 1931	3.1	50.7	31.3	47.0	77.8	107.7	48.2
December 1931	5.7	40.0	25.7	46.6	71.2	103.5	45.1
June 1932	[1] 12.0	32.0	15.8	45.3	54.9	102.7	35.2
December 1932	[1] 8.1	26.3	4.8	45.6	49.5	96.2	32.1
June 1933	[1] 13.9	24.8	[1] 5.6	43.1	46.7	87.0	25.7
December 1933	[1] 4.0	40.8	[1] 10.5	38.8	67.8	86.4	31.9
Mobile, Ala.:							
June 1920	110.5	137.4	34.6	86.3	177.9	100.3	107.0
December 1920	73.5	122.2	53.6	122.3	175.4	100.7	93.3
June 1928	45.4	47.5	41.0	90.0	93.3	107.3	63.5
December 1928	49.6	48.1	41.6	92.1	92.3	108.3	65.7
June 1929	47.5	47.2	41.0	84.0	87.9	108.1	64.0
December 1929	49.0	47.2	40.6	85.8	87.3	108.3	64.8
June 1930	39.6	46.8	38.9	81.2	85.6	108.1	60.3
December 1930	33.0	40.0	36.3	[2] 58.6	73.5	107.5	54.4
June 1931	12.1	34.1	32.5	49.6	57.5	105.4	43.0
December 1931	7.4	26.2	24.6	49.7	50.6	102.3	38.0
June 1932	[1] 10.0	18.9	16.3	42.1	43.5	98.1	27.4
December 1932	[1] 9.0	17.6	3.6	34.7	43.8	97.7	25.9
June 1933	[1] 12.1	16.8	[1] 5.6	25.8	44.1	93.7	22.1
December 1933	[1] 4.0	31.3	[1] 8.6	39.4	64.9	96.6	29.8

[1] Decrease.

[2] The decrease is due primarily to the change in consumption and price accompanying the change from manufactured to natural gas.

TABLE 3.—CHANGES IN COST OF LIVING IN 19 CITIES, JUNE 1920 TO DECEMBER 1933—Continued

City and date	Percent of increase over December 1914 in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
New York, N.Y.:							
June 1920	105.3	241.4	32.4	60.1	205.1	111.9	119.2
December 1920	73.5	201.8	38.1	87.5	185.9	116.3	101.4
June 1928	47.5	90.3	69.3	94.4	97.8	118.6	74.4
December 1928	53.0	88.4	68.6	96.3	96.4	118.8	76.3
June 1929	50.6	87.8	67.6	92.0	96.2	121.4	75.5
December 1929	54.9	85.9	66.1	95.1	95.4	122.9	77.1
June 1930	43.7	85.5	65.1	85.7	90.5	123.3	71.7
December 1930	35.9	82.2	63.1	90.9	85.5	123.7	67.5
June 1931	19.6	67.6	61.5	86.3	62.5	123.5	57.1
December 1931	14.4	56.5	58.4	90.4	52.3	120.6	52.0
June 1932	4.1	51.0	53.0	76.5	44.7	118.6	44.8
December 1932	1.9	37.6	44.1	80.4	37.9	116.0	40.2
June 1933	[1].9	34.8	35.2	73.0	39.4	108.7	35.5
December 1933	8.9	51.0	29.0	80.3	56.3	107.7	42.1
Norfolk, Va.:							
June 1920	107.6	176.5	70.8	110.6	165.0	108.4	122.2
December 1920	76.3	153.6	90.8	128.9	160.5	106.3	109.0
June 1928	50.2	71.6	41.7	95.6	85.7	114.6	71.5
December 1928	55.0	71.8	39.6	100.3	86.1	118.2	74.1
June 1929	51.9	71.3	38.8	94.3	85.2	118.0	72.3
December 1929	55.8	70.4	37.1	92.7	83.0	119.3	73.5
June 1930	43.3	68.7	36.0	87.3	80.4	118.6	67.9
December 1930	36.7	66.2	33.3	97.0	73.5	119.0	64.8
June 1931	15.0	57.7	32.6	83.6	63.8	119.0	54.0
December 1931	9.8	46.2	29.3	83.0	56.1	118.3	48.8
June 1932	[1].3	38.9	27.0	67.4	47.4	107.8	39.9
December 1932	[1]4.7	34.2	18.2	68.4	42.4	110.3	36.5
June 1933	[1]11.4	31.0	16.2	53.4	40.5	100.2	30.2
December 1933	1.7	45.4	7.5	70.3	56.9	108.2	40.6
Philadelphia, Pa.:							
June 1920	101.7	219.6	28.6	66.8	187.4	102.8	113.5
December 1920	68.1	183.5	38.0	96.0	183.4	122.3	100.7
June 1928	51.3	76.5	67.1	81.5	85.4	121.4	75.3
December 1928	51.7	74.0	63.8	87.3	83.9	120.3	74.5
June 1929	50.0	72.6	59.9	85.4	84.1	121.2	73.1
December 1929	56.1	71.2	56.5	86.3	84.7	121.2	75.0
June 1930	42.6	69.7	54.0	86.5	83.2	121.4	69.0
December 1930	34.4	64.9	51.2	95.8	75.3	120.7	64.5
June 1931	20.8	57.6	45.8	80.5	63.2	118.5	55.3
December 1931	17.0	42.0	40.3	91.7	54.1	117.6	50.5
June 1932	.1	33.4	33.7	67.4	43.9	113.2	38.6
December 1932	[1]3.8	26.3	25.7	71.9	31.8	108.7	33.9
June 1933	[1]5.2	23.6	17.7	62.8	26.7	104.5	30.1
December 1933	6.0	36.8	12.8	75.7	46.7	106.1	38.2
Portland, Maine:							
June 1920	114.5	165.9	14.5	83.9	190.3	89.4	107.6
December 1920	78.7	147.8	20.0	113.5	191.2	94.3	93.1
June 1928	54.2	66.5	21.5	98.4	112.5	88.8	63.8
December 1928	57.0	64.8	20.9	102.4	112.3	97.3	66.6
June 1929	54.3	65.8	19.8	94.1	112.3	97.3	64.8
December 1929	55.7	65.6	19.8	101.9	112.1	97.1	65.8
June 1930	45.9	65.4	19.9	96.9	111.9	97.1	61.5
December 1930	38.5	60.4	19.3	99.9	105.8	95.9	57.2
June 1931	20.5	55.7	17.9	95.3	99.2	95.9	48.2
December 1931	17.2	47.9	17.0	97.3	91.0	95.7	45.1
June 1932	5.2	38.6	15.0	84.1	81.1	94.9	36.9
December 1932	2.1	24.7	11.6	85.9	69.9	93.5	32.3
June 1933	[1].4	23.1	6.9	66.6	75.7	92.0	29.0
December 1933	7.7	39.8	3.8	74.3	87.6	95.6	36.7
Portland, Oreg.:							
June 1920	107.1	158.6	33.2	46.9	183.9	79.7	100.4
December 1920	60.9	122.1	36.9	65.9	179.9	81.1	80.3
June 1928	36.6	50.8	20.9	51.6	80.5	76.4	50.5
December 1928	41.8	49.4	16.4	63.0	80.1	78.0	52.4
June 1929	41.4	48.4	11.0	51.4	79.7	77.3	50.7
December 1929	43.7	47.8	8.2	61.8	81.0	77.7	51.6
June 1930	34.2	44.8	5.4	49.7	78.6	86.6	49.1
December 1930	17.8	38.4	2.4	55.5	69.7	85.1	41.5
June 1931	8.2	32.9	[1]1.3	36.4	65.8	83.6	35.2
December 1931	6.0	23.3	[1]6.2	40.1	56.8	82.9	31.9
June 1932	[1]6.9	15.9	[1]13.2	22.9	42.7	79.6	22.7
December 1932	[1]6.8	10.0	[1]19.0	24.9	36.4	76.9	20.1
June 1933	[1]10.7	10.6	[1]23.9	18.4	37.5	67.5	15.4
December 1933	[1]6.8	21.8	[1]27.2	35.4	50.8	67.2	19.8

[1] Decrease.

TABLE 3.—CHANGES IN COST OF LIVING IN 19 CITIES, JUNE 1920 TO DECEMBER 1933—Continued

City and date	Percent of increase over December 1914 in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
San Francisco and Oakland, Calif.:							
June 1920	93.9	191.0	9.4	47.2	180.1	79.6	96.0
December 1920	64.9	175.9	15.0	66.3	175.6	84.8	85.1
June 1928	41.5	82.9	35.7	45.9	102.0	79.6	58.8
December 1928	48.0	83.4	33.5	47.5	99.0	83.2	61.7
June 1929	45.1	82.8	31.9	43.7	97.8	83.4	60.1
December 1929	48.7	81.5	30.4	40.3	97.4	82.5	60.8
June 1930	40.4	77.9	28.1	[2] 28.7	100.6	80.9	55.9
December 1930	32.0	72.0	26.1	32.0	91.6	82.0	51.5
June 1931	15.8	66.3	24.2	28.8	79.3	79.1	42.8
December 1931	10.3	57.5	20.2	30.6	66.6	78.7	38.1
June 1932	.5	48.7	14.8	25.1	52.9	76.2	30.8
December 1932	2.7	39.6	9.3	24.6	49.1	74.8	28.9
June 1933	[1] .9	37.4	3.9	24.5	49.8	71.7	25.7
December 1933	4.8	59.2	.5	25.2	64.3	72.5	31.6
Savannah, Ga.:							
June 1920	91.7	212.1	33.5	65.3	207.2	83.8	190.4
December 1920	63.5	171.5	58.6	94.4	206.6	91.5	98.7
June 1928	31.1	68.8	35.9	56.9	120.8	81.9	56.6
December 1928	35.0	69.0	33.9	59.6	118.8	87.0	59.1
June 1929	33.9	68.2	32.7	55.8	117.9	83.8	57.2
December 1929	35.1	67.7	28.3	56.1	117.2	84.5	57.2
June 1930	25.2	66.0	27.0	54.2	113.7	84.7	53.1
December 1930	17.7	61.4	19.6	56.2	110.1	83.8	48.3
June 1931	1.5	58.0	15.8	50.7	98.5	83.8	40.7
December 1931	[1] 4.7	44.6	9.5	40.9	89.0	82.3	33.9
June 1932	[1] 18.1	35.2	4.0	39.6	79.0	76.8	25.0
December 1932	[1] 16.8	29.0	[1] 4.3	37.6	67.4	75.2	22.0
June 1933	[1] 20.8	26.9	[1] 9.7	36.6	67.9	70.8	18.7
December 1933	[1] 10.0	44.0	[1] 12.7	43.3	80.8	70.8	26.3
Seattle, Wash.:							
June 1920	102.3	173.9	74.8	65.8	221.2	90.4	110.5
December 1920	54.1	160.5	76.7	78.7	216.4	95.5	94.1
June 1928	36.9	68.8	55.5	57.1	133.5	97.4	65.8
December 1928	40.8	68.3	54.1	62.9	132.6	97.4	67.1
June 1929	43.7	66.6	52.4	62.1	131.7	98.8	67.7
December 1929	45.9	66.6	52.1	65.8	132.6	98.8	68.7
June 1930	38.1	64.6	50.1	65.5	132.4	98.6	65.4
December 1930	22.5	59.7	47.8	64.0	128.0	97.6	58.4
June 1931	12.2	55.7	44.4	54.0	114.5	96.6	52.3
December 1931	8.8	45.9	37.5	61.5	103.1	94.6	48.0
June 1932	[1] 3.1	35.2	25.3	56.3	83.4	90.5	38.2
December 1932	[1] 5.1	28.7	15.4	48.5	77.7	88.8	33.7
June 1933	[1] 3.6	28.8	8.0	45.6	82.1	85.8	32.5
December 1933	[1] 2.0	42.1	3.1	47.2	98.5	85.4	35.1
Washington, D.C.:							
June 1920	108.4	184.0	15.6	53.7	196.4	68.2	101.3
December 1920	79.0	151.1	24.7	68.0	194.0	73.9	87.8
June 1928	55.5	67.0	32.7	38.8	102.2	73.6	59.7
December 1928	58.2	65.2	31.0	41.0	99.4	73.8	60.2
June 1929	58.4	64.4	30.5	38.0	100.0	74.0	60.0
December 1929	57.4	62.3	30.0	39.7	100.2	74.3	59.2
June 1930	49.1	60.5	29.7	36.2	100.4	73.8	55.5
December 1930	41.3	55.4	28.7	36.6	93.0	76.8	51.8
June 1931	22.8	49.7	28.2	32.5	86.6	75.7	43.0
December 1931	17.8	39.7	27.9	34.9	79.9	75.3	39.0
June 1932	2.4	28.0	27.1	26.7	61.2	74.6	29.5
December 1932	[1] 1.4	20.7	22.5	29.2	57.3	72.7	25.8
June 1933	[1] 1.0	17.1	17.2	23.5	55.4	70.1	23.6
December 1933	8.4	35.7	14.3	28.3	72.8	72.1	31.6

[1] Decrease.
[2] The decrease is due primarily to the change in consumption and price accompanying the change from manufactured to natural gas.

The changes in the cost of living from December 1917 to December 1933 and specified intervening dates for 13 cities are reported in table 4. This table is constructed in the same manner as table 3 and differs only in the base period.

TABLE 4.—CHANGES IN COST OF LIVING IN 13 CITIES, JUNE 1920 TO DECEMBER 1933

City and date	Percent of increase over December 1917 in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Atlanta, Ga.:							
June 1920	34.0	80.5	40.4	61.0	65.0	34.6	46.7
December 1920	12.8	56.5	73.1	66.8	58.4	39.7	38.5
June 1928	[1] 1.0	.2	38.9	31.8	15.2	35.6	13.9
December 1928	2.9	.4	38.2	36.3	14.9	35.3	15.6
June 1929	.3	.3	37.5	28.4	14.6	33.0	13.6
December 1929	.1	[1].6	35.9	31.6	14.1	34.2	13.5
June 1930	[1] 7.9	[1] 2.8	32.8	[2] 11.6	11.2	31.8	7.9
December 1930	[1] 13.1	[1] 6.4	30.8	11.6	8.0	30.5	4.5
June 1931	[1] 24.2	[1] 8.5	28.3	3.6	1.7	28.2	[1] 1.7
December 1931	[1] 29.2	[1] 16.7	19.6	4.8	[1] 5.7	28.7	[1] 6.2
June 1932	[1] 36.6	[1] 21.4	14.6	[1] 2.7	[1] 12.3	28.2	[1] 11.5
December 1932	[1] 39.8	[1] 24.9	.2	.4	[1] 16.4	25.4	[1] 15.4
June 1933	[1] 39.4	[1] 25.7	[1] 5.8	[1] 6.6	[1] 16.1	21.8	[1] 17.2
December 1933	[1] 35.9	[1] 15.9	[1] 11.2	4.6	[1] 3.0	23.6	[1] 12.9
Birmingham, Ala.:							
June 1920	36.4	66.4	40.3	55.3	55.6	28.7	41.9
December 1920	11.9	45.1	68.5	74.2	48.1	30.4	33.3
June 1928	[1] 4.7	[1] 4.3	59.4	37.1	13.9	28.2	13.7
December 1928	[1] 2.2	[1] 4.2	54.8	43.4	12.3	27.2	14.2
June 1929	[1] 3.9	[1] 4.3	50.8	35.5	10.6	26.1	12.3
December 1929	[1] 2.8	[1] 5.0	40.8	38.8	10.5	27.2	11.8
June 1930	[1] 8.9	[1] 5.9	35.9	33.2	9.3	26.4	8.2
December 1930	[1] 14.0	[1] 9.1	23.5	38.5	2.7	25.1	3.8
June 1931	[1] 30.6	[1] 13.1	15.1	25.3	[1] 5.4	24.2	[1] 5.6
December 1931	[1] 33.2	[1] 20.1	1.5	24.9	[1] 11.0	24.1	[1] 9.6
June 1932	[1] 40.8	[1] 25.5	[1] 7.6	9.0	[1] 23.4	21.6	[1] 16.4
December 1932	[1] 39.9	[1] 28.2	[1] 22.7	9.2	[1] 24.4	21.0	[1] 18.7
June 1933	[1] 40.8	[1] 28.6	[1] 28.4	2.3	[1] 26.4	15.6	[1] 21.4
December 1933	[1] 37.3	[1] 17.7	[1] 30.8	15.9	[1] 15.9	17.0	[1] 17.0
Cincinnati, Ohio:							
June 1920	38.7	96.7	13.6	26.9	75.5	47.6	47.1
December 1920	10.3	73.5	25.0	34.1	66.7	53.4	34.7
June 1928	[1].5	[1] 3.9	57.1	61.1	15.4	49.7	21.0
December 1928	.4	[1] 5.5	57.1	61.6	14.7	49.6	21.2
June 1929	2.5	[1] 5.8	56.9	60.8	13.6	49.7	21.8
December 1929	4.5	[1] 6.4	56.7	70.9	13.1	51.2	23.1
June 1930	[1] 1.2	[1] 7.1	54.5	63.6	11.6	51.5	20.1
December 1930	[1] 8.0	[1] 8.7	52.8	69.7	8.7	49.4	16.6
June 1931	[1] 20.4	[1] 17.5	49.3	59.2	[1] .4	51.5	9.1
December 1931	[1] 24.2	[1] 22.4	43.9	64.6	[1] 5.1	50.3	5.8
June 1932	[1] 37.3	[1] 24.3	34.1	54.7	[1] 11.3	48.6	[1] 2.3
December 1932	[1] 38.3	[1] 26.9	25.2	60.0	[1] 15.8	47.6	[1] 4.5
June 1933	[1] 38.7	[1] 28.7	13.8	51.2	[1] 12.3	45.1	[1] 7.3
December 1933	[1] 33.5	[1] 23.5	11.3	65.7	[1] 3.9	45.6	[1] 3.7
Denver, Colo.:							
June 1920	41.5	96.8	51.9	22.3	60.2	35.4	50.3
December 1920	7.9	78.3	69.8	47.1	58.9	38.8	38.7
June 1928	[1] 8.6	8.4	55.8	26.9	20.5	33.4	14.9
December 1928	[1] 6.3	8.2	54.1	39.3	19.8	33.8	16.3
June 1929	[1] 7.4	8.0	52.3	[2] 19.0	17.4	38.8	15.6
December 1929	[1] 6.8	7.9	51.1	29.2	16.0	38.7	16.1
June 1930	[1] 11.9	7.0	49.4	22.6	15.3	38.0	13.0
December 1930	[1] 19.9	5.5	47.8	27.4	12.4	37.6	9.7
June 1931	[1] 28.7	2.3	43.1	7.9	8.1	36.9	3.8
December 1931	[1] 30.6	[1] 6.5	37.1	7.1	[1].2	36.5	.3
June 1932	[1] 38.6	[1] 15.3	28.2	1.2	[1] 9.1	35.8	[1] 6.3
December 1932	[1] 37.7	[1] 19.7	20.5	[1] 4.8	[1] 10.7	34.2	[1] 8.3
June 1933	[1] 38.8	[1] 19.9	11.3	[1] 3.2	[1] 10.9	31.2	[1] 10.5
December 1933	[1] 35.0	[1] 14.0	5.7	5.0	[1] 1.4	31.2	[1] 7.8
Indianapolis, Ind.:							
June 1920	49.0	87.9	18.9	45.6	67.5	40.5	50.2
December 1920	11.0	72.3	32.9	60.3	63.0	47.5	37.6
June 1928	[1] 1.8	4.3	31.3	29.2	13.7	52.3	18.2
December 1928	[1].3	3.2	30.4	32.3	12.6	52.0	18.5
June 1929	[1].8	3.0	28.4	26.1	12.7	52.3	17.7
December 1929	2.0	2.4	27.9	31.0	11.7	52.0	18.8
June 1930	[1] 2.7	1.2	25.9	24.8	9.0	51.8	16.1
December 1930	[1] 14.2	[1] 1.6	23.9	30.2	5.6	50.4	10.8
June 1931	[1] 26.5	[1] 10.4	16.8	23.8	[1] 3.6	49.5	3.0
December 1931	[1] 29.1	[1] 19.4	11.3	23.7	[1] 12.4	49.2	[1].8
June 1932	[1] 37.6	[1] 22.9	3.4	12.1	[1] 17.0	48.5	[1] 6.6
December 1932	[1] 39.0	[1] 25.5	[1] 6.6	17.3	[1] 19.1	44.8	[1] 9.5
June 1933	[1] 39.4	[1] 25.9	[1] 14.7	14.1	[1] 16.5	40.3	[1] 11.9
December 1933	[1] 35.0	[1] 17.6	[1] 17.3	26.3	[1] 6.6	41.0	[1] 7.8

[1] Decrease.

[2] The decrease is due primarily to the change in consumption and price accompanying the change from manufactured to natural gas.

TABLE 4.—CHANGES IN COST OF LIVING IN 13 CITIES, JUNE 1920 TO DECEMBER 1933—Continued

City and date	Percent of increase over December 1917 in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Kansas City, Mo.:							
June 1920	44.9	104.5	29.4	35.2	73.0	37.1	51.0
December 1920	10.2	76.3	63.9	55.1	68.7	40.3	39.5
June 1928	[1] 5.4	2.7	24.8	28.7	6.8	35.0	11.2
December 1928	[1] 6.0	2.9	23.8	26.8	5.6	37.8	11.3
June 1929	[1] 5.3	2.4	21.1	26.3	5.1	37.0	11.0
December 1929	[1] 2.2	1.8	20.1	23.9	3.4	36.9	11.7
June 1930	[1] 8.6	1.5	19.4	24.0	2.1	36.9	9.0
December 1930	[1] 15.8	1.0	19.8	22.0	[1] 1.1	44.3	7.7
June 1931	[1] 24.9	[1] 1.7	17.4	19.7	[1] 6.2	44.0	2.9
December 1931	[1] 28.9	[1] 9.9	16.3	14.3	[1] 11.5	42.3	[1] 1.1
June 1932	[1] 38.7	[1] 17.1	8.2	12.0	[1] 18.0	37.6	[1] 8.5
December 1932	[1] 38.4	[1] 21.6	2.8	9.4	[1] 21.1	35.9	[1] 10.5
June 1933	[1] 38.5	[1] 22.8	[1] 7.9	8.0	[1] 20.3	33.6	[1] 12.7
December 1933	[1] 36.0	[1] 15.2	[1] 10.4	9.1	[1] 11.9	32.9	[1] 10.5
Memphis, Tenn.:							
June 1920	38.8	77.5	35.9	49.7	67.1	38.8	46.4
December 1920	7.0	59.0	66.2	105.4	53.9	43.2	39.3
June 1928	[1] 8.1	1.5	46.3	60.0	16.0	36.9	16.4
December 1928	[1] 4.9	.2	43.7	68.8	14.8	37.7	17.5
June 1929	[1] 6.0	[1] .1	42.6	[2] 63.6	13.8	38.5	16.8
December 1929	[1] 5.1	[1] .1	40.6	55.3	13.9	38.6	16.5
June 1930	[1] 10.6	[1] .6	39.6	58.9	13.3	39.6	14.7
December 1930	[1] 19.2	[1] 2.4	35.8	57.9	10.7	38.8	10.4
June 1931	[1] 31.3	[1] 4.8	29.8	48.3	6.2	35.5	3.4
December 1931	[1] 34.2	[1] 10.4	18.4	48.3	[1] .9	35.2	[1] .5
June 1932	[1] 42.3	[1] 14.5	11.3	45.9	[1] 6.5	29.0	[1] 7.1
December 1932	[1] 43.3	[1] 19.0	[1] .7	31.7	[1] 14.7	31.3	[1] 10.4
June 1933	[1] 44.0	[1] 19.6	[1] 7.5	31.6	[1] 13.6	28.9	[1] 12.0
December 1933	[1] 38.1	[1] 11.0	[1] 12.2	43.3	[1] 4.3	31.0	[1] 7.6
Minneapolis, Minn.:							
June 1920	50.0	76.7	10.7	36.9	65.5	31.3	43.4
December 1920	13.0	63.6	36.8	60.3	65.8	37.6	35.7
June 1928	1.6	[1] 1.1	27.2	45.2	12.3	34.6	15.8
December 1928	.7	[1] 1.5	27.5	44.6	10.5	34.5	15.2
June 1929	1.8	[1] 1.8	25.6	41.9	10.5	36.7	15.4
December 1929	3.9	[1] 2.8	25.2	44.3	10.9	36.6	16.2
June 1930	[1] 1.0	[1] 3.5	23.6	46.2	10.6	36.3	14.1
December 1930	[1] 9.4	[1] 4.4	23.5	39.9	7.8	37.0	10.6
June 1931	[1] 21.2	[1] 8.8	21.4	41.6	3.7	35.4	5.0
December 1931	[1] 25.5	[1] 16.2	19.8	44.3	[1] 2.7	36.1	2.1
June 1932	[1] 35.2	[1] 23.3	12.1	37.1	[1] 12.4	35.6	[1] 4.9
December 1932	[1] 36.0	[1] 26.4	6.7	39.2	[1] 14.1	30.3	[1] 7.5
June 1933	[1] 38.7	[1] 28.2	[1] 2.7	22.4	[1] 13.8	27.2	[1] 12.2
December 1933	[1] 30.5	[1] 20.1	[1] 6.2	31.5	[1] 3.9	26.3	[1] 7.6
New Orleans, La.:							
June 1920	28.6	94.9	12.9	36.3	75.9	42.8	41.9
December 1920	10.7	69.4	39.7	41.5	63.9	57.1	36.7
June 1928	[1] 6.8	13.1	55.9	34.5	17.9	46.1	18.2
December 1928	[1] 3.2	13.1	54.8	28.4	17.9	46.8	19.5
June 1929	[1] 4.3	12.6	53.6	[2] 14.9	15.9	45.9	17.8
December 1929	[1] 1.8	12.6	51.3	18.1	15.7	45.8	18.8
June 1930	[1] 9.8	12.0	49.2	12.4	14.8	46.5	14.8
December 1930	[1] 15.0	.1	45.3	14.4	10.2	46.5	10.2
June 1931	[1] 30.3	[1] 2.7	43.0	[1] 6.5	5.9	43.1	1.2
December 1931	[1] 30.3	[1] 9.7	38.7	4.1	[1] .5	45.2	.3
June 1932	[1] 40.5	[1] 13.9	35.4	[1] 4.4	[1] 8.7	42.6	[1] 6.4
December 1932	[1] 38.5	[1] 16.2	26.9	[1] 6.4	[1] 10.8	41.6	[1] 7.2
June 1933	[1] 41.6	[1] 18.5	21.1	[1] 10.7	[1] 11.2	39.2	[1] 10.4
December 1933	[1] 34.8	[1] 11.5	16.3	4.9	1.2	39.1	[1] 5.8
Pittsburgh, Pa.:							
June 1920	36.5	91.3	34.9	31.7	77.4	41.2	49.1
December 1920	14.3	75.4	35.0	64.4	78.1	46.3	39.3
June 1928	[1] 3.8	4.2	72.8	85.6	15.9	46.9	22.3
December 1928	2.1	3.5	71.6	86.0	16.4	46.9	24.4
June 1929	.6	2.9	68.3	85.6	15.1	48.1	23.2
December 1929	1.2	2.1	67.1	86.0	14.6	47.5	23.2
June 1930	[1] 5.6	1.5	64.9	85.1	13.5	47.9	19.9
December 1930	[1] 13.4	[1] 3.9	63.7	84.4	6.6	47.5	15.2
June 1931	[1] 24.2	[1] 9.4	56.8	83.1	.4	46.9	8.4
December 1931	[1] 29.2	[1] 13.3	52.3	83.8	[1] 6.4	45.6	4.5
June 1932	[1] 38.4	[1] 17.0	35.9	81.6	[1] 14.5	42.5	[1] 3.4
December 1932	[1] 38.8	[1] 21.2	29.4	77.4	[1] 17.0	40.8	[1] 5.8
June 1933	[1] 40.3	[1] 22.7	10.9	76.9	[1] 18.1	38.7	[1] 9.8
December 1933	[1] 33.6	[1] 16.2	7.1	82.6	[1] 7.9	39.7	[1] 5.7

[1] Decrease.

[2] The decrease is due primarily to the change in consumption and price accompanying the change from manufactured to natural gas.

TABLE 4.—CHANGES IN COST OF LIVING IN 13 CITIES, JUNE 1920 TO DECEMBER 1933—Continued

City and date	Percent of increase over December 1917 in expenditure for—						
	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
Richmond, Va.:							
June 1920	36.1	93.6	12.5	36.1	75.4	32.4	43.8
December 1920	11.9	69.0	25.9	62.2	70.0	36.0	33.3
June 1928	[1] 3.8	5.0	30.6	43.9	33.8	41.0	15.3
December 1928	[1] 3.1	5.4	28.9	47.5	32.7	40.9	15.7
June 1929	[1] 5.0	4.2	28.3	42.0	32.4	40.2	14.2
December 1929	[1] 3.4	4.2	27.0	44.7	31.3	41.0	14.9
June 1930	[1] 8.0	3.3	26.5	38.5	30.0	41.3	12.5
December 1930	[1] 14.9	2.0	25.5	42.0	26.6	41.0	9.3
June 1931	[1] 27.2	[1] 2.4	24.4	33.1	18.6	40.6	2.4
December 1931	[1] 29.2	[1] 8.6	21.8	37.6	15.5	40.3	.3
June 1932	[1] 39.2	[1] 13.9	20.0	25.6	2.8	38.3	[1] 6.7
December 1932	[1] 39.7	[1] 18.1	10.4	24.5	[1] 1.6	34.4	[1] 9.6
June 1933	[1] 41.7	[1] 19.1	7.0	17.7	[1] 2.1	30.9	[1] 12.1
December 1933	[1] 34.4	[1] 7.8	[1] 1.3	27.6	12.9	33.0	[1] 6.4
St. Louis, Mo.:							
June 1920	46.2	89.7	29.8	19.6	73.1	37.6	48.9
December 1920	8.8	70.0	42.4	42.6	70.2	43.2	35.4
June 1928	[1] 3.5	3.1	76.3	18.9	21.6	37.2	19.9
December 1928	[1] 2.2	2.5	74.2	23.1	19.5	38.7	20.4
June 1929	[1] .4	1.7	71.8	22.5	17.8	38.4	20.5
December 1929	[1] .5	.8	69.2	33.4	16.2	44.2	21.7
June 1930	[1] 6.7	([2])	66.0	21.8	16.9	44.6	18.3
December 1930	[1] 14.9	[1] 1.4	59.5	29.1	15.4	42.1	13.9
June 1931	[1] 24.9	[1] 10.7	53.0	12.4	5.9	41.5	6.2
December 1931	[1] 29.8	[1] 19.2	44.0	20.7	[1] .6	39.2	1.4
June 1932	[1] 38.3	[1] 22.4	34.4	17.4	[1] 8.6	39.1	[1] 4.3
December 1932	[1] 39.4	[1] 25.7	22.3	14.1	[1] 12.7	38.7	[1] 7.4
une 1933	[1] 38.2	[1] 26.6	11.2	.2	[1] 11.5	36.1	[1] 9.6
December 1933	[1] 33.7	[1] 17.8	4.8	13.5	[1] 2.2	36.4	[1] 6.3
Scranton, Pa.:							
June 1920	41.4	97.7	17.2	43.5	62.8	47.9	51.5
December 1920	17.8	76.5	18.5	67.3	62.0	50.4	39.1
June 1928	2.4	16.2	71.7	69.0	30.1	56.2	26.9
December 1928	4.3	15.3	71.7	72.2	29.3	57.8	27.8
June 1929	2.9	15.2	68.1	65.0	26.5	57.5	26.3
December 1929	6.5	13.7	63.9	67.6	26.0	57.3	27.3
June 1930	[1] .8	13.5	60.5	60.2	26.0	57.3	23.5
December 1930	[1] 8.1	10.7	59.1	66.1	22.9	56.8	19.5
June 1931	[1] 20.3	3.9	53.2	61.3	18.2	55.2	11.8
December 1931	[1] 22.8	[1] 7.1	51.8	69.5	7.3	55.2	8.4
June 1932	[1] 32.1	[1] 9.5	43.8	45.3	3.7	52.1	1.3
December 1932	[1] 33.4	[1] 14.1	40.6	53.3	1.0	51.0	[1] .5
June 1933	[1] 35.1	[1] 15.1	30.1	33.5	[1] 2.5	48.4	[1] 4.1
December 1933	[1] 27.6	[1] 4.3	26.5	47.4	8.0	49.9	2.1

[1] Decrease. [2] No change.

The Economy Act of March 20, 1933 (H.R. 2820), directed the President of the United States to reduce salaries of Federal employees in accordance with the reduction in the cost of living until that reduction equaled 15 percent of basic salaries or salaries in effect when the act was passed. The act further empowered the President to then eliminate that portion of the reduction and restore salaries when the changes in the cost of living warranted such action.

The cost-of-living index as calculated by the Bureau of Labor Statistics was selected as the medium for the determining of the changes to be applied to Federal employees' salaries. The base period selected in accordance with the act was the 6 months ending June 30, 1928. From these figures the President was authorized to determine an index figure of the cost of living to be used as the base and from future inves-

tigations to determine index figures upon which shall be based further changes in employees' salaries. The period to be covered by each survey was 6 months.

In the following table (no. 5) there are given index numbers by groups of items and by cities for December 1933 using the average index for the base period (average December 1927–June 1928) as 100 percent.

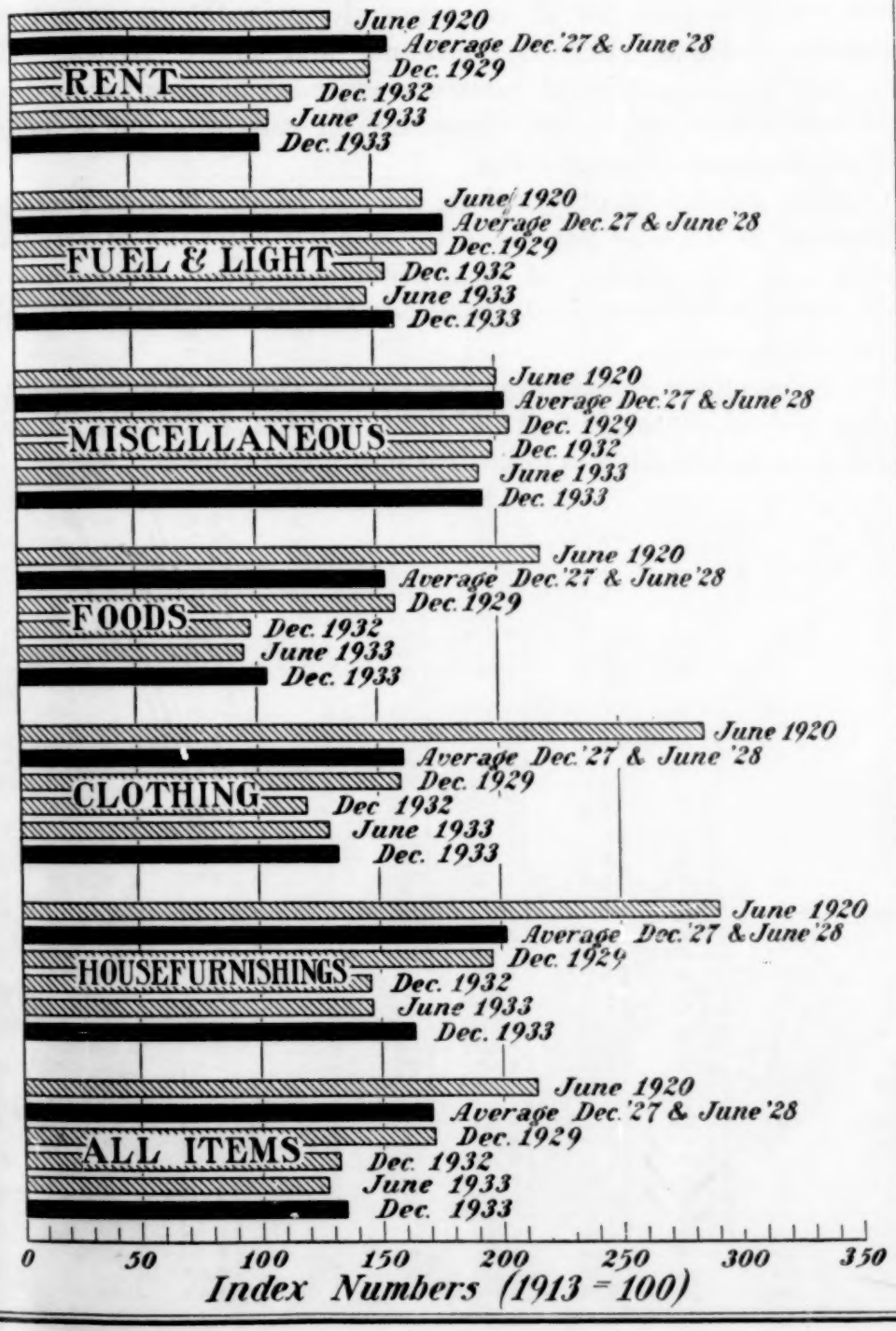
✓ The index for the United States as a whole for December 1933 was 78.9, showing that at the end of 1933 the general cost of living was 21.1 percent below the average for December 1927 and June 1928. In the same period rents decreased 34.5 percent, foods fell by 31.6 percent, house furnishings by 18.8 percent, clothing by 17.9 percent, fuel and light by 11.6 percent, and the miscellaneous group of items by 4.6 percent. These and other detailed facts appear in the table.

TABLE 5.—CHANGES IN COST OF LIVING BETWEEN SPECIFIED DATES, BY GROUPS OF ITEMS

City	Food	Clothing	Rent	Fuel and light	House-furnishing goods	Miscellaneous	All items
	Percent of increase from December 1914 to December 1933 in the cost of–						
Baltimore	7.8	39.0	24.5	75.7	64.5	115.1	41.9
Boston	1.6	56.5	17.2	71.7	83.6	85.1	34.1
Buffalo	6.5	39.9	14.7	119.5	67.8	100.6	42.0
Chicago	6.5	17.0	2.1	41.0	50.0	89.7	28.7
Cleveland	–.7	33.7	1.1	156.1	52.6	112.4	39.5
Detroit	1.3	37.1	–16.2	48.2	46.3	103.6	28.7
Houston	1.0	43.4	–18.1	6.5	92.2	82.1	29.3
Jacksonville	–4.3	50.8	–27.5	53.6	81.9	84.7	32.8
Los Angeles	–4.0	40.8	–10.5	38.8	67.8	86.4	31.9
Mobile	–4.0	31.3	–8.6	39.4	64.9	96.6	29.8
New York	8.9	51.0	29.0	80.3	56.3	107.7	42.1
Norfolk	1.7	45.4	7.5	70.3	56.9	108.2	40.6
Philadelphia	6.0	36.8	12.8	75.7	46.7	106.1	38.2
Portland, Maine	7.7	39.8	3.8	74.3	87.6	95.6	36.7
Portland, Oreg	–6.8	21.8	–27.2	35.4	50.8	67.2	19.8
San Francisco	4.8	59.2	.5	25.2	64.3	72.5	31.6
Savannah	–10.0	44.0	–12.7	43.3	80.8	70.8	26.3
Seattle	–2.0	42.1	3.1	47.2	98.5	85.4	35.1
Washington	8.4	35.7	14.3	28.3	72.8	72.1	31.6
	Percent of increase from December 1917 to December 1933						
Atlanta	–35.9	–15.9	–11.2	4.6	–3.0	23.6	–12.9
Birmingham	–37.3	–17.7	–30.8	15.9	–15.9	17.0	–17.0
Cincinnati	–33.5	–23.5	11.3	65.7	–3.9	45.6	–3.7
Denver	–35.0	–14.0	5.7	5.0	–1.4	31.2	–7.8
Indianapolis	–35.0	–17.6	–17.3	26.3	–6.6	41.0	–7.8
Kansas City	–36.0	–15.2	–10.4	9.1	–11.9	32.9	–10.5
Memphis	–38.1	–11.0	–12.2	43.3	–4.3	31.0	–7.6
Minneapolis	–30.5	–20.1	–6.2	31.5	–3.9	26.3	–7.6
New Orleans	–34.8	–11.5	16.3	4.9	1.2	39.1	–5.8
Pittsburgh	–33.6	–16.2	7.1	82.6	–7.9	39.7	–5.7
Richmond	–34.4	–7.8	–1.3	27.6	12.9	33.0	–6.4
St. Louis	–33.7	–17.8	4.8	13.5	–2.2	36.4	–6.3
Scranton	–27.6	–4.3	26.5	47.4	8.0	49.9	2.1
	Percent of increase from 1913 to December 1933						
Average, United States	5.5	33.6	4.1	59.3	64.8	95.9	35.0

CHANGES IN COST OF LIVING BY GROUPS OF ITEMS FOR SPECIFIED DATES

U. S. Department of Labor
BUREAU OF LABOR STATISTICS
Washington



Cost of Living in the United States and in Foreign Countries

THE trend of cost of living in the United States and certain foreign countries for June and December, 1929, 1930, 1931, 1932, and 1933, is shown in the following table. In cases where data for December 1933 are not available, the latest information is given and the month noted. The number of countries included varies according to the available information.

A general index and index numbers for the individual groups of items are presented for all countries shown with the exception of Australia, Ireland, The Netherlands, and South Africa. These countries publish a general index and an index number for food only. Fuel and light is not shown separately for Australia but is included in the miscellaneous group index.

Caution should be observed in the use of the figures because of differences in the base periods in the number and kind of articles included and the number of localities represented. There are also very radical differences in the method of the construction and calculation of the indexes.

The table shows the trend in the general cost of living and for the groups of food, clothing, fuel and light, and rent for the countries for which such information is published in original sources.

INDEX NUMBERS OF COST OF LIVING FOR SPECIFIED PERIODS FOR THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES

Country	United States	Australia (30 towns)	Austria, Vienna	Belgium	Bulgaria	Canada	Chile, Santiago	China, Shanghai
Commodities included	Food, clothing, fuel and light, rent, house-furnishing goods, miscellaneous	Food, clothing, rent, miscellaneous	Food, clothing, fuel and light, rent, sundries [1]	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries (revised)	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, miscellaneous (revised)	Food, clothing, fuel and light, rent, miscellaneous
Computing agency	Bureau of Labor Statistics	Bureau of Census and Statistics	Federal Statistical Bureau	Ministry of Labor and Industry	Federal Statistical Bureau	Dominion Bureau of Statistics	Office of Statistics	National Tariff Commission ✔
Base period	1913=100	1923–1927 =1,000	July 1914 =100	1921=100	1926=100	1926=100	March 1928=100	1926=100
General:								
1929—June	170.2	[2] 1,026	111	212.6	[2] 102.4	99.0	109.4	105.4
December	171.4	[2] 1,026	113	227.7	[2] 102.4	101.6	111.7	111.5
1930—June	166.6	[3] 991	113	224.0	[2] 93.7	100.2	106.9	120.2
December	160.7	[3] 926	108	222.5	[2] 93.7	95.9	106.4	113.8
1931—June	150.3	[3] 880	106	204.5	[2] 81.1	88.7	108.0	121.0
December	145.8	[3] 845	108	193.1	[2] 81.1	85.9	101.9	121.2
1932—June	135.7	[3] 835	109	179.7	75.3	81.0	106.5	121.3
December	132.1	[3] 811	107	187.9	74.1	79.5	129.3	108.0
1933—June	128.3	[3] 803	106	177.2	68.6	77.0	141.0	105.4
December	135.0	[4] 803	[5] 105	[6] 177.3	[7] 68.6	78.4	[6] 141.1	[5] 103.2
Food:								
1929—June	154.8	1,045	124	207.8	[2] 106.4	97.8	121.0	93.5
December	158.0	1,011	122	227.1	[2] 106.4	104.8	130.7	104.5
1930—June	147.9	968	121	201.1	[2] 86.7	100.4	114.8	119.2
December	137.2	871	111	200.1	[2] 86.7	91.5	112.0	100.8
1931—June	118.3	833	108	176.5	[2] 68.0	75.0	102.3	99.6
December	114.3	809	110	160.7	[2] 68.0	71.2	107.7	97.0
1932—June	100.1	803	113	143.8	65.1	62.1	105.7	107.3
December	98.7	759	109	156.9	62.1	64.0	139.8	84.5
1933—June	96.7	759	106	143.4	59.2	62.2	147.8	84.1
December	105.5	[4] 764	[5] 104	[6] 144.0	[7] 59.5	66.6	[6] 145.5	[5] 83.2
Clothing:								
1929—June	161.3	----------	183	255.8	[2] 101.3	96.9	101.2	97.0
December	160.5	----------	183	262.0	[2] 101.3	96.5	99.3	98.8
1930—June	158.9	----------	183	262.0	[2] 97.3	95.0	99.3	99.1
December	153.0	----------	177	259.8	[2] 97.3	88.3	96.9	99.0
1931—June	146.0	----------	162	250.8	[2] 86.8	81.1	96.9	110.2
December	135.5	----------	166	246.4	[2] 86.8	76.4	96.9	108.8
1932—June	127.8	----------	162	236.1	77.5	71.9	126.5	98.3
December	121.5	----------	162	231.9	77.2	69.2	178.2	92.0
1933—June	119.8	----------	159	225.2	59.7	66.1	183.9	89.5
December	133.6	----------	[5] 157	[6] 224.3	[9] 59.7	70.0	[6] 184.1	[7] 89.4
Fuel and light:								
1929—June	175.2	----------	103	194.3	[3] 101.2	95.7	96.0	123.8
December	178.7	----------	106	212.8	[2] 101.2	96.9	93.3	120.2
1930—June	172.8	----------	104	204.6	[2] 89.8	94.9	105.1	120.5
December	175.0	----------	104	198.3	[2] 89.8	95.7	101.2	119.6
1931—June	165.4	----------	104	184.0	[2] 82.6	93.3	94.2	128.3
December	168.0	----------	104	182.4	[2] 82.6	93.9	89.2	140.8
1932—June	157.1	----------	104	173.8	85.3	90.9	99.9	131.7
December	156.9	----------	105	177.0	82.6	89.3	116.6	128.7
1933—June	148.4	----------	105	164.9	76.0	87.6	143.3	115.9
December	159.3	----------	[5] 112	[6] 163.7	[9] 74.0	87.2	[6] 144.8	[7] 113.2
Rent:								
1929—June	153.7	----------	15	223.7	[3] 99.2	103.6	100.0	102.2
December	151.9	----------	22	226.8	[3] 99.2	105.5	100.0	102.4
1930—June	149.6	----------	22	406.0	[2] 99.5	105.5	100.0	104.5
December	146.5	----------	25	405.0	[2] 99.5	105.5	100.0	104.5
1931—June	142.0	----------	25	402.5	[2] 91.3	103.3	100.0	105.6
December	136.2	----------	27	401.0	[2] 91.3	99.3	100.0	107.3
1932—June	127.8	----------	28	398.5	84.3	93.9	100.0	107.3
December	118.0	----------	28	397.5	84.3	90.0	100.0	108.8
1933—June	108.8	----------	28	394.8	83.8	84.0	100.0	109.8
December	104.1	----------	[5] 28	[6] 393.7	[9] 83.8	80.4	[6] 100.0	[7] 109.8

[1] Gold.
[2] Yearly only.
[3] Quarter ending with month.
[4] May.
[5] November.
[6] July.
[7] September.
[8] October.
[9] August.

INDEX NUMBERS OF COST OF LIVING FOR SPECIFIED PERIODS FOR THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES—Continued

Country	Czechoslovakia, Prague	Estonia, Tallin	Finland	France, Paris	Germany	India, Bombay	Ireland	Italy, Milan
Commodities included	Food, clothing, fuel and light, rent, sundries [1]	Food, clothing, fuel and light, rent, etc.	Food, clothing, fuel, rent, light, taxes, etc.	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel, light, rent	Food, clothing, fuel and light, rent, sundries	Food, clothing, fuel and light, rent, sundries
Computing agency	Office of Statistics	Bureau of Statistics	Ministry of Social Affairs	Commission for study of cost of living ✓	Federal Statistical Bureau	Labor Office	Department of Industry and Commerce ✓	Municipal administration ✓
Base period	July 1914=100	1913=100	January-June 1914=100	January-June 1914=100	1913-14=100	July 1914=100	July 1914=100	January-June 1914=100
General:								
1929—June	[6] 111.1	119	1,215.3	556	153.4	147	[10] 173	544.3
December	[6] 111.1	109	1,207.2	565	152.6	150	[8] 179	549.2
1930—June	111.1	102	1,108.3	572	147.6	140	[10] 168	530.9
December	105.8	99	1,083.2	597	141.6	121	[8] 168	508.3
1931—June	106.8	104	1,019.9	589	137.8	109	[4] 156	488.0
December	101.6	95	1,048.0	531	130.4	109	[8] 165	472.7
1932—June	103.6	95	1,003.4	535	121.4	107	[4] 159	471.7
December	103.8	89	1,021.1	516	118.4	110	[8] 155	468.0
1933—June	102.7	85	985.3	516	118.8	104	[4] 148	446.7
December	[5] 100.6	[5] 89	[5] 1,011.7	[7] 516	[5] 120.4	[5] 101	[5] 156	[5] 447.7
Food:								
1929—June	[6] 123.1	130	1,103.1	590	154.0	144	[10] 164	541.7
December	[6] 123.1	112	1,090.1	589	152.2	148	[8] 173	548.0
1930—June	118.1	101	937.2	593	142.7	137	[10] 156	522.5
December	109.4	96	903.3	636	134.8	116	[8] 156	499.0
1931—June	109.3	93	842.4	642	130.9	101	[4] 139	456.6
December	99.1	80	918.8	555	119.9	101	[8] 155	437.8
1932—June	101.4	80	871.0	567	113.4	99	[4] 144	438.0
December	102.3	75	910.2	531	109.0	103	[8] 135	433.9
1933—June	98.8	74	881.7	532	110.7	95	[4] 126	402.9
December	[5] 94.6	[5] 78	[5] 923.2	[7] 530	[5] 113.4	[5] 92	[5] 140	[5] 405.1
Clothing:								
1929—June	[6] 145.7	150	1,055.4	604	172.4	159	----------	555.2
December	[6] 145.7	150	1,051.3	604	170.3	151	----------	548.8
1930—June	133.2	150	1,045.6	626	166.8	138	----------	508.8
December	119.9	147	1,033.6	610	149.8	125	----------	447.7
1931—June	111.9	147	1,004.1	552	139.9	123	----------	421.2
December	105.8	145	975.7	508	129.1	117	----------	390.3
1932—June	100.5	141	979.1	499	117.2	115	----------	371.8
December	96.1	136	978.2	499	112.4	116	----------	366.1
1933—June	95.4	120	963.6	499	110.6	115	----------	347.7
December	[5] 95.4	[5] 134	[5] 967.4	[7] 504	[5] 112.8	[5] 112	----------	[5] 346.8
Fuel and light:								
1929—June	[6] 123.0	97	1,455.5	539	148.9	143	----------	425.0
December	[6] 123.0	101	1,455.4	602	152.9	143	----------	453.1
1930—June	121.6	96	1,407.1	607	149.4	143	----------	473.0
December	121.6	94	1,290.1	633	151.1	141	----------	457.3
1931—June	119.7	80	1,066.8	596	145.4	143	----------	424.3
December	119.7	76	913.5	619	148.8	145	----------	404.3
1932—June	117.5	65	865.9	592	133.8	137	----------	403.6
December	117.4	64	887.4	617	136.6	137	----------	394.4
1933—June	114.7	57	878.1	585	133.4	136	----------	393.3
December	[5] 114.7	[5] 61	[5] 882.1	[7] 600	[5] 136.1	[5] 136	----------	[5] 392.2
Rent:								
1929—June	[6] 46.3	52	1,476.3	300	126.0	172	----------	407.6
December	[6] 46.3	52	1,476.3	350	126.7	172	----------	410.2
1930—June	49.6	52	1,467.0	350	129.8	172	----------	410.2
December	52.8	52	1,467.0	350	131.3	172	----------	422.2
1931—June	54.4	145	1,373.1	350	131.6	158	----------	473.1
December	54.4	145	1,373.1	360	131.6	158	----------	482.7
1932—June	54.4	144	1,263.9	360	121.4	158	----------	445.1
December	54.4	135	1,252.0	375	121.4	158	----------	490.5
1933—June	54.9	120	1,132.1	375	121.3	158	----------	488.9
December	[5] 54.9	[5] 114	[5] 1,132.1	[7] 375	[5] 121.3	[5] 158	----------	[4] 491.0

[1] Gold. [4] May. [5] November. [6] July. [7] September. [8] October. [10] April.

INDEX NUMBERS OF COST OF LIVING FOR SPECIFIED PERIODS FOR THE UNITED STATES AND CERTAIN FOREIGN COUNTRIES—Continued

Country	Netherlands, Amsterdam	New Zealand	Norway	Poland, Warsaw	South Africa	Sweden	Switzerland	United Kingdom
Commodities included	Food, all commodities	Food, clothing, fuel, light, rent, sundries	Food, clothing, fuel, light, rent, sundries	Food, clothing, fuel, light, rent, sundries	Food, fuel, light, rent, sundries	Food, clothing, fuel and light, rent, taxation, sundries	Food, clothing, fuel, light, rent, sundries	Food, clothing, fuel, light, rent, sundries
Computing agency	Bureau of Statistics	Census and Statistics Office	Central Statistical Office	Central Statistical Office	Office of Census and Statistics	Board of Social Welfare	Federal Labor Office	Ministry of Labor
Base period	1911-1913 =100	1926-1930 =1,000	July 1914 =100	1927= 100	1914= 1,000	July 1914 =100	June 1914 =100	July 1914 =100
General:								
1929—June	169.0	[9] 1,003	164	101.7	1,320	[10] 171	161	160
December	167.4	[8] 1,003	165	100.4	1,294	[8] 170	162	167
1930—June	162.1	[4] 990	161	94.0	1,293	[10] 165	158	154
December	156.6	[8] 963	159	93.8	1,258	[8] 163	156	155
1931—June	153.5	[4] 913	151	88.4	1,233	[10] 160	150	145
December	145.2	[8] 888	150	83.3	1,206	[8] 158	145	148
1932—June	140.9	[4] 839	149	81.9	1,179	[10] 157	138	142
December	140.2	[8] 806	148	73.2	1,146	[8] 156	134	143
1933—June	137.4	[4] 798	147	72.2	1,148	[10] 153	131	136
December	[7] 139.5	[8] 800	[8] 147	[8] 69.8	[7] 1,146	[8] 154	[8] 131	143
Food:								
1929—June	165.3	[9] 1,009	156	94.7	1,176	[10] 151	155	147
December	161.6	[8] 1,017	157	91.7	1,124	[8] 150	157	159
1930—June	151.6	988	151	80.9	1,120	[10] 140	151	138
December	144.8	922	149	80.2	1,085	[8] 137	149	141
1931—June	140.6	839	138	75.9	1,064	[10] 130	141	127
December	125.5	835	136	69.1	1,004	[8] 128	134	132
1932—June	119.2	778	133	68.1	963	[10] 125	125	123
December	119.2	713	132	56.7	926	[8] 125	120	125
1933—June	116.5	723	130	58.3	989	[10] 119	116	114
December	[7] 121.1	[8] 752	[8] 130	[8] 54.8	[7] 987	[8] 123	[8] 117	126
Clothing:								
1929—June	----------	[9] 978	159	106.5	----------	[10] 185	167	218
December	----------	[8] 972	157	108.9	----------	[8] 183	165	215
1930—June	----------	[4] 952	153	105.8	----------	[10] 181	160	213
December	----------	[8] 924	148	99.6	----------	[8] 178	155	205
1931—June	----------	[4] 877	143	81.3	----------	[10] 175	145	195
December	----------	[8] 849	142	76.4	----------	[8] 170	137	190
1932—June	----------	[4] 826	144	73.0	----------	[10] 168	127	190
December	----------	[8] 784	143	69.0	----------	[8] 167	122	188
1933—June	----------	[4] 821	142	62.9	----------	[10] 163	117	185
December	----------	[9] 823	[7] 142	[8] 62.6	----------	[8] 163	[8] 115	185
Fuel and light:								
1929—June	----------	[9] 993	161	127.6	----------	[10] 165	134	170
December	----------	[8] 990	160	134.6	----------	[8] 160	135	175
1930—June	----------	[4] 990	157	130.5	----------	[10] 160	132	170
December	----------	[8] 994	150	132.1	----------	[8] 156	131	175
1931—June	----------	[4] 990	148	131.7	----------	[10] 155	127	170
December	----------	[8] 975	146	129.2	----------	[8] 150	125	175
1932—June	----------	[4] 978	146	128.1	----------	[10] 149	121	170
December	----------	[8] 954	142	123.8	----------	[8] 144	121	173
1933—June	----------	[4] 894	139	100.9	----------	[10] 139	118	168
December	----------	[9] 854	[8] 137	[8] 105.9	----------	[8] 136	[8] 119	170
Rent:								
1929—June	----------	[9] 1,023	175	131.1	----------	[10] 200	181	153
December	----------	[8] 1,019	175	134.3	----------	[8] 200	181	152
1930—June	----------	[4] 1,012	174	154.8	----------	[10] 205	185	153
December	----------	[8] 998	174	170.1	----------	[8] 205	185	154
1931—June	----------	[4] 964	173	170.1	----------	[10] 206	187	154
December	----------	[8] 922	173	170.1	----------	[8] 206	187	154
1932—June	----------	[9] 816	172	170.1	----------	[10] 206	187	154
December	----------	[8] 795	172	170.1	----------	[8] 206	187	155
1933—June	----------	[4] 768	172	170.1	----------	[10] 202	184	156
December	----------	[9] 762	[6] 168	[8] 170.1	----------	[8] 202	[8] 184	156

[4] May. [6] July. [8] October. [10] April.
[8] November. [7] September. [9] August.

PUBLICATIONS RELATING TO LABOR

Official—United States

INDIANA.—Department of Public Instruction. Division of Vocational Education. *Bulletin No. 109: Occupations in Indiana, 1930. A study of the census figures for Indiana, prepared by George K. Wells. Indianapolis, 1933. 12 pp.*

MASSACHUSETTS.—Department of Labor and Industries. *Annual report, for the year ending November 30, 1932.* [*Boston, 1933?*] *193 pp., charts.* (*Public Doc. No. 4.*)

Among the subjects selected for special emphasis by the Commissioner of Labor and Industries in this report were the low-wage problem and overtime employment.

PENNSYLVANIA.—Employment Commission. *Thirty thousand in search of work, by Gladys L. Palmer. Harrisburg, Department of Labor and Industry, 1933. 93 pp., charts.*

A study of the clients of the State employment office in Philadelphia in the first eight months of the operation of that agency as a demonstration center.

—— Emergency Relief Board. *Unemployment relief in Pennsylvania, September 1, 1932–October 31, 1933. Harrisburg, 1933. 99 pp., charts.*

Included in the recommendations of the executive director of the board is one for the "unequivocal abandonment of any attempt to make work a quid pro quo for the granting of public relief or need the main qualification for public employment." According to this report, however, self-generating and self-rewarding voluntary programs to make communities better places to live in should be encouraged as an entirely separate matter.

PUERTO RICO.—Governor. *Thirty-third annual report* [*for the fiscal year ending June 30, 1933*]. *San Juan, 1933. 159 pp., maps, charts.*

Gives some wage statistics for coffee plantations, the building trades, and miscellaneous industrial establishments.

The Governor states that wages in general declined between 10 and 20 percent as compared with the year preceding that covered by the report. Accurate figures on cost of living for 1932–33 were not available, but it is believed that the cost of living for the middle and lower classes decreased at approximately the same rate.

UNITED STATES.—Board of Mediation. *Annual report, for the fiscal year ended June 30, 1933. Washington, 1933. 45 pp., chart.*

Reviewed in this issue.

—— Department of Commerce. Bureau of Foreign and Domestic Commerce. *Statistical abstract of the United States, 1933. Washington, 1933. 786 pp.*

Includes information on immigration and emigration, prices, wages and hours of labor, employment, cooperative marketing and purchasing through farmers' organizations, production, and distribution.

—— —— Bureau of Mines. *Information Circular 6752: Explosions in Utah coal mines, 1900–1932, by D. J. Parker. Washington, 1933. 15 pp.* (*Mimeographed.*)

Analyzes causes of explosions and indicates means of prevention.

—— —— —— *Information Circular 6753: Explosions in Colorado coal mines, 1883 to 1932, by B. M. Kintz and E. H. Denny. Washington, 1933. 20 pp.*

Presents a tabulation of data, including causes of explosions and possible means of prevention.

UNITED STATES.—Department of Commerce. Bureau of Mines. *Information Circular 6755: The experimental mine of the United States Bureau of Mines, by G. S. Rice, H. P. Greenwald, and H. C. Howarth. Washington, 1933. 21 pp., map.*

Describes the property and equipment, the history of the mine, and investigations conducted there, principally in connection with coal dust. Includes a bibliography relating to testing work.

——— Bureau of Navigation and Steamboat Inspection. *Merchant marine statistics, 1933. Washington, 1933. 118 pp.*

Data on wages of seamen on American vessels, taken from this report, are given in this issue of the Monthly Labor Review.

— Department of Labor. Bureau of Labor Statistics. *Bulletin No. 591: Wages and hours of labor in the hosiery and underwear industries, 1932. Washington, 1933. 98 pp.*

——— ——— *Bulletin No. 592: Decisions of courts and opinions affecting labor, 1931 and 1932. Washington, 1933. 387 pp.*

——— ——— ——— *Bulletin No. 593: Technological changes and employment in the electric-lamp industry, by Witt Bowden. Washington, 1933. 62 pp., chart, diagrams, illus.*

——— ——— ——— *Bulletin No. 594: Wages and hours of labor in the men's clothing industry, 1932. Washington, 1933. 65 pp.*

——— ——— ——— *Bulletin No. 603: Comparative digest of labor legislation for the States of Alabama, Florida, Georgia, South Carolina, Tennessee, to be used at the Georgia Conference on Labor Legislation, December 13, 1933, Atlanta, Ga. Washington, 1933. 66 pp.*

——— ——— Children's Bureau. *Publication No. 224: The county as an administrative unit for social work, by Mary Ruth Colby. Washington, 1933. 48 pp.*

In 1922, 1926, and 1927 the Children's Bureau issued publications on this subject. The present study analyzes the status of county organization in the United States, and shows the developments which have taken place since the earlier publications were issued.

— Department of the Interior. *Annual report of the Secretary of the Interior for the fiscal year ended June 30, 1933. Washington, 1933. 329 pp., charts.*

The report of the Federal Board for Vocational Education, the functions of which were on October 10, 1933, assigned to the United States Commissioner of Education, is included in this report and is summarized in this issue of the Monthly Labor Review.

— Federal Board for Vocational Education. *Bulletin No. 167, Agricultural Series No. 43: The earning ability of farmers who have received vocational training. A comparison of the earnings of former vocational students now farming with the earnings of an equivalent group in farming who did not receive vocational training. Washington, 1933. 44 pp.*

According to this report, the average labor incomes realized by the vocationally trained farmers were greater for each type of farming than the labor incomes of farmers who had not received such training. In 6 out of 9 farming projects the trained group secured larger yields. On the whole the individuals in the trained group were about twice as active in farm organizations as the untrained group.

——— *Bulletin No. 168, Trade and Industrial Series No. 49: Vocational training for the pulp and paper industry. Washington, 1933. 247 pp.*

A job analysis of the industry covered, with suggestions for the organization and operation of training programs.

— Government Printing Office. *Labor: Child labor, women, employment, wages, workmen's insurance, and compensation. List of publications relating to above subjects for sale by Superintendent of Documents, Washington, D.C. Washington, September 1933. 38 pp. (Price list 33—19th edition.)*

Official—Foreign Countries

AMSTERDAM (NETHERLANDS).—[Centrale Commissie voor Georganiseerd Overleg in Werkliedenzaken (C.C.W.).] *Verslag omtrent de bemoeiingen der gemeente Amsterdam in arbeidszaken en de verkzekering tegen werkloosheid in 1932. [Amsterdam, 1933?] 96 pp.*

Contains a report on public unemployment insurance in the city of Amsterdam, the subjects covered including legislation, organization of the insurance system, employment and unemployment, insurance benefits and relief, etc.

FRANCE.—Caisse Nationale des Retraites pour la Vieillesse. Commission Supérieure. *Rapport sur les opérations et la situation de cette caisse, 1931. Paris, 1933. 132 pp.*

The report of the French national old-age pension fund for the year 1931.

—— Ministère du Travail et de la Prévoyance Sociale. Conseil Supérieur du Travail. [*Compte rendu*] *trente-sixième session, November 1932. Paris, 1933. 188 pp.*

The report of the annual meeting of the French Superior Labor Council.

GERMANY.—Statistisches Reichsamt. *Statistisches Jahrbuch für das Deutsche Reich, 1933. Berlin, 1933.* [*Various paging.*]

Includes statistics of wages, cost of living, employment, employment service, unemployment, social insurance, welfare work, public health, etc. Some of the data given in the volume are for 1933 but most of the statistics are for earlier years.

GREAT BRITAIN. [Board of Education.] Adult Education Committee. *Paper No. 11: Adult education and the local education authority. London, 1933. 171 pp.*

According to this report, two of the present weaknesses in adult education in Great Britain are the confusion of objectives and standards and the ill-proportioned growth of the less intensive courses.

—— Mines Department. Safety in Mines Research Board. *Paper No. 79: The inflammation of coal dusts—The effect of the nature of added incombustible dust, by T. N. Mason and R. V. Wheeler. London, 1933. 133 pp., charts.*

Describes tests which indicate that certain dusts are more effective than others in the prevention of coal-dust explosions.

—— —— —— *Paper No. 80: The ignition of firedamp by the filaments of broken electric lamp bulbs, by G. Allsop and T. S. E. Thomas. London, 1933. 13 pp., diagrams, illus.*

Indicates that current-interrupting devices are not effective when the filament current exceeds 2 amperes.

—— Ministry of Health. Committee on Housing. *Report. London, 1933. 68 pp. (Cmd. 4397.)*

The committee was appointed in March 1933 to consider the reconditioning of existing houses. It recommends that local authorities be authorized to acquire and recondition houses not now fit for occupancy but which can be given a life of 20 years. This would be done through public-utility societies, with funds loaned by the Treasury. It also urges advances to such societies to provide new housing and a subsidy on the new housing meeting certain conditions as to rents charged, kind of housing provided, etc. The whole scheme should be supervised by a central public-utility council, consisting of not more than five members, to be appointed by the Minister.

INTERNATIONAL LABOR OFFICE.—*Studies and Reports, Series C, No. 18: Employment exchanges—an international study of placing activities. Geneva, 1933. 231 pp. (World Peace Foundation, American agent, Boston.)*

NETHERLANDS.—Centrale Commissie Voor de Statistiek. *Jaarverslag over het jaar 1932. The Hague, 1933. 19 pp.*

Annual report on the activities of the Central Statistical Commission of the Netherlands during the year 1932, including information on wages, housing, industrial accidents, etc.

—— Rijksverzekeringsbank. *Ongevallenstatistiek, 1931. Amsterdam, 1933. 117*, 268 pp.*

Contains statistics on industrial accidents (including those in agriculture) compensated under the accident insurance laws of the Netherlands in 1931. The data are given by localities, industries, trades, occupations, and by severity and duration of injuries.

NEW SOUTH WALES.—Director-General of Public Health. *Studies in Industrial Hygiene, No. 17: Coal miner's lung; a preliminary account of the chemical analysis and pathology of the lungs of coal miners in New South Wales, by Charles Badham and Harold Burfield Taylor.* [*Sydney*], *1933. 16 pp., illus.*

This investigation deals with the chemical analysis and pathology of the lungs of 31 persons, all but two of whom had been employed as coal miners or in other dusty occupations in which there was exposure to free silica or combined silica and silicates.

NORWAY.—Rikstrygdeverket. *Syketrygden for året 1932. Oslo, 1933. 76 pp.*

Annual report on public insurance against sickness in Norway in 1932, with comparative data for earlier years.

SOVIET UNION (U.S.S.R.).—Scientific Institute for the Protection of Labor. *Popular Library, No. 9: The circular rip saw and its dangers. Moscow, 1931. 45 pp., illus. (In Russian.)*

Discusses the dangers in the use of the circular rip saw, and the use of safety devices to guard against accidents.

——— *Popular Library, No. 11: Rationalization of the work and improvement of health conditions of women employed on peat bogs. Moscow, 1931. 24 pp., diagrams, illus. (In Russian.)*

——— *Popular Library, No. 14: Improvement of furniture [used by workers] in workshops. Moscow, 1931. 28 pp., diagrams. (In Russian.)*

Discusses the need for improvement in workers' furniture in workshops in the Soviet Union, and suggests an educational campaign for improved furniture from the point of view of the workers' health.

UNION OF SOUTH AFRICA.—Department of Mines and Industries. *Annual report of the Government Mining Engineer, for the calendar year 1932. Pretoria, 1933. [Various paging], charts.*

A summary of that part of this report relating to miners' phthisis is given in this issue.

Unofficial

BAKER, ROBERT OSBORNE. *The International Alliance of Theatrical Stage Employees and Moving Picture Machine Operators of the United States and Canada. Lawrence, Kans., 1933. 94 pp.*

A study of the organization, activities, and benefits of the union.

BERUFSGENOSSENSCHAFT DER FEINMECHANIK UND ELEKTROTECHNIK. *Jahresbericht 1932 über die Durchführung der Unfallverhütungsvorschriften und die Massnahmen für die erste Hilfe. Berlin, [1933?]. 50 pp.*

Annual report on the enforcement of the regulations for accident prevention and on measures for first aid, including the activities of the technical factory inspectors, during 1932.

CHIRIAC, GEORGES. *Les assurances sociales en Roumanie. Paris, A. Pedone, 1932. 315 pp.*

A discussion of the various forms of social insurance in force in Roumania.

DONALD, W. J. *Trade associations: Management policies, organization, personnel, services. New York, McGraw-Hill Book Co., Inc., 1933. 437 pp.*

In the discussion of trade association services the writer discusses public relations, purchasing, production, finance, personnel and labor relations, and industrial and economic planning.

DUNCAN, HANNIBAL GERALD. *Immigration and assimilation. Boston, New York, etc., D. C. Heath & Co., 1933. 890 pp., maps.*

The first section of this volume, on backgrounds for immigration, discusses the various nationality groups; the second part covers immigration and assimilation in the United States. Analyses are given of political, economic, educational, and religious developments in various countries.

FARMER, ERIC. *The causes of accidents. London, Sir Isaac Pitman & Sons, Ltd., 1932. 88 pp.*

In addition to the discussion of causes of accidents, the book includes suggestions for employers as to methods of recording accidents and treatment of accident-prone workers.

FEDERAL CODES, INC. *A handbook of N.R.A.: Laws, regulations, codes, with supplement service. Washington, 1406 G Street, 1933. 413 pp.*

A compilation of all statutes, Executive orders, codes, etc., connected with the National Industrial Recovery Act. Supplements are published biweekly.

GAMBLE, SIDNEY D. *How Chinese families live in Peiping. New York, Funk & Wagnalls Co., 1933. 348 pp., charts, illus.*

Based on detailed written accounts kept by 283 families for 1 year.

HECKSCHER FOUNDATION. Vocational Guidance Bureau. *Finding your place in life through vocational guidance and opportunities for training. New York, 1 East 104th Street, 1933. 79 pp.*

Contains brief descriptions of some vocations, authoritative articles concerning careers, and an index of 467 occupations in regard to any one of which the reader may secure information by filling in a perforated form included in this handbook and forwarding such blank to the director of the Heckscher Foundation's vocational guidance bureau.

HILDRETH, GERTRUDE H. *A bibliography of mental tests and rating scales. New York, Psychological Corporation, 1933. 242 pp.*

Compiled to meet the need for a convenient first reference as to what measurements of this character have been attempted and the devices that have been used or are at present available.

INDUSTRIAL ACCIDENT PREVENTION ASSOCIATIONS [OF ONTARIO, CANADA]. *Digest of the 1933 safety convention and annual general meeting, held at Toronto, April 27 and 28, 1933. [Toronto, 1933.] 96 pp., charts.*

Includes list of officers, committees, and directors of the affiliated safety associations.

INFORMATION BUREAU ON WOMEN'S WORK. *Average annual earnings in Ohio, 1915–32, inclusive. Toledo, Ohio, 2418 Robinwood Avenue [1933]. 3 pp.*

—— *Ohio wage earners in laundries and dry-cleaning establishments, 1914–32, by Amy G. Maher. Toledo, Ohio, 2418 Robinwood Avenue [1933]. 11 pp., charts.*

INSTITUTE FOR SCIENCE OF LABOR. *Report No. 15: A study on the physical development of female workers, especially with regard to their fitness for maternity, by Korehiro Ogawa, M.D. Kurasiki, Japan, 1933. 19 pp., charts.*

The author finds it impossible to agree with the theory that mechanical industrial work begun at an early age is a great obstacle to the physical development of women.

—— *Report No. 17: Studies on the output curve, by Takatugu Yagi. Kurasiki, Japan, 1933. 46 pp., charts.*

This study of fatigue, as measured by output in Japanese spinning mills, deals with the work of groups of spinning girls on day work and on night work, and shows the days of the week on which maximum output is reached in both groups for both the winter and summer seasons.

INSTITUTO NACIONAL DE PREVISION. *Comentarios médicos a la nueva ley de accidentes del trabajo, por Dr. A. Oller. Madrid, Spain, 1932. 77 pp.*

A discussion of the medical problems in fixing compensation benefits under the workmen's compensation law of July 4, 1932, of Spain. Comparative schedules of compensation benefits of other countries are given.

JEWKES, JOHN, AND WINTERBOTTOM, ALLAN. *Juvenile unemployment. London, George Allen & Unwin, Ltd., 1933. 159 pp. (Publication of the research section of the Department of Economics and Commerce, University of Manchester.)*

A survey of conditions in Lancashire and Cumberland, which were selected as containing a sufficient variety of occupations and industries to be typical. Unemployment was found to be heavy, and to be coupled with a general breakdown in trade and industrial training. Children leaving school were employed, if at all, mainly in unskilled work, and were replaced, before they could claim higher wages, by others leaving school in their turn. There was a serious lack of preparation for future responsibilities.

To improve the situation, the authors strongly urge that the school-leaving age should be raised, thus reducing the number of young workers seeking employment, and that if this is not done, the age of entry into insurance should be lowered, and junior instruction centers should be so developed and extended that the vast majority of unemployed workers under 18 would be in attendance at them.

JOHNSON, CHARLES S. *The economic status of Negroes: Summary and analysis of the materials presented at the Conference on the Economic Status of the Negro, held in Washington, D.C., May 11–13, 1933, under the sponsorship of the Julius Rosenwald Fund. Nashville, Tenn., Fisk University Press, 1933. 53 pp.*

A brief report of this conference was given in the Monthly Labor Review for July 1933 (p. 42).

KUCZYNSKI, JÜRGEN. *Die Entwicklung der Löhne in Frankreich und Belgien, 1895–1933. Berlin-Schlachtensee, Terrassenstrasse 17, 1934. 28 pp.*

Deals with the wage developments in France and Belgium during the period 1895 to 1933.

MARTIN, LILLIEN J., AND DE GRUCHY, CLARE. *Sweeping the cobwebs. New York, Macmillan Co., 1933. 181 pp.*

Shows what can be done, by psychotherapy, in "abolishing unhappy old age", in reanimating middle aged and aged people, and drawing them back to useful family and community life.

MILLER, SPENCER, JR., Editor. *American labor and the Nation. Chicago, University of Chicago Press, 1933.* [*Various paging.*]

A collection of 20 radio addresses on labor's contribution to American life. The first 10 are historical and the second 10, contemporary. These papers were originally published as separate pamphlets.

MOSHER, A., and WOLFE, E. J. *Self-help projects in the United States: An annotated list. New York, Russell Sage Foundation, November 1933. 43 pp.* (*Mimeographed.*)

NATIONAL CONFERENCE OF JEWISH SOCIAL SERVICE. *Proceedings, annual session, held in Detroit, Mich., June 8–11, 1933. New York, 71 West Forty-seventh Street, 1933. 139 pp.*

The subjects discussed at the general sessions included the economic trends affecting American Jewish life, programs of Jewish community organization in the light of changing trends, and a social philosophy for the communal worker.

NATIONAL CONFERENCE OF SOCIAL WORK. *Proceedings of the sixtieth annual session, held in Detroit, Mich., June 11–17, 1933. Chicago, University of Chicago Press, 1933. 751 pp.*

Includes papers on public relief, minimum-wage laws, barter and self-help among the unemployed, consumers' cooperative movement, housing, immigration, etc., mainly in relation to social work.

NATIONAL INDUSTRIAL CONFERENCE BOARD, INC. *Individual and collective bargaining under the N.I.R.A.: A statistical study of present practice, November 1933. New York, 247 Park Avenue, 1933. 37 pp.*

Reviewed in this issue.

NATIONAL SAFETY COUNCIL, INC. *Transactions of the twenty-first annual safety congress, Washington, October 3 to 7, 1932. Chicago, 20 North Wacker Drive, 1933. 2 vols.*

Digests of the papers presented at the general and sectional meetings of the congress. A brief summary of the convention proceedings, including a list of the officers selected for the year 1932–33, was published in the Monthly Labor Review for November 1932 (p. 1102).

—— *You and your job. Chicago, 20 North Wacker Drive, 1933. 40 pp., illus.*

A booklet of safety instruction, describing an imaginary trip through an imaginary plant where accidents do not occur.

PRINCETON UNIVERSITY. Industrial Relations Section. *The use of credit unions in company programs for employee savings and investment. Princeton, N.J., 1933. 37 pp.* (*Revised.*)

PUBLIC ADMINISTRATION SERVICE. *Publication No. 34: Federal and State legislation for unemployment relief and national recovery, 1933, by Marietta Stevenson and Lucy Williams Brown of the American Public Welfare Association. Chicago, 850 East Fifty-eighth Street, 1933. 19 pp.*

ROOSEVELT, MRS. FRANKLIN D. *It's up to the women. New York, Frederick A. Stokes Co., 1933. 263 pp.*

Discusses the problems of the home, including health, training of children, etc., the opportunities for women in public service and in various occupations, working conditions for women, and the adjustments necessary to be made to the life of today.

RUTGERS UNIVERSITY. School of Education. *Studies in Education, No. 3: Migrants as a social and educational problem in New Jersey, by Laura Fair. New Brunswick, N.J., 1932. 40 pp., illus.*

Report on a study of children of Italian migrant families at Whitesbog, N.J., during the blueberry and cranberry seasons of 1930 and 1931, and of the living and working conditions of these families in their homes in Philadelphia, Pa., and Camden, N.J., in the winter of 1930–31. It was found that the children were not as seriously retarded in school work as might be expected, and that their adjustments to life were approximately normal.

SOZIALRECHTLICHES JAHRBUCH. *Herausgeben im Auftrage des Forschungsinstituts für Sozialwissenschaften, Köln. Band IV. Mannheim, 1933. 236 pp.*

Deals with various social problems in Germany, such as land settlement, education of unemployed persons, welfare work, etc.

STEINER, JESSE FREDERICK. *Americans at play. New York, McGraw-Hill Book Co., 1933. 201 pp.*

This report, showing recent tendencies in recreation and leisure-time activities, is one of a series of monographs prepared under the direction of the President's (Hoover) Research Committee on Social Trends.

STELZIG REINHARDT. *Die Rechtsnatur der Sozialversicherung. Weimar, 1933. 79 pp. (Schriften des Instituts für Arbeitsrecht an der Universität Leipzig, 32. Heft.)*

Deals with the legal nature of social insurance in Germany, including legal duties of insured workers and their employers, and relations between social insurance and private commercial insurance.

TRADES AND LABOR CONGRESS OF CANADA. *Report of the proceedings of the forty-ninth annual convention, held at Windsor, Ontario, September 18–23, 1933. [Ottawa?], 1933. 204 pp.*

A résumé of the proceedings of the convention was published in the January 1934 Monthly Labor Review.

UNION SUISSES DES PAYSANS. Secrétariat des Paysans suisses. *Recherches relatives à la rentabilité de l'agriculture pendant l'exercice 1931–32, IIe partie. Bern, 1933. (Tirage à part de l'Annuaire agricole de la Suisse, 1933, pp. 588–710.)*

Regular yearly report of the Secrétariat of Swiss Farmers on the cost of production in agriculture.

WAŚCISZAKOWSKI, LEON. *Pracownicy młodociani w świetle badań kas chorych. Warsaw, 1933. 40 pp. (Bibljoteczka "Wiadomości kas Chorych", No. 39.)*

A report on the results of medical examinations of young workers conducted by the Sickness Insurance Fund in Poland in 1931, including number of workers examined, and diseases and other health defects discovered, by industries and occupations. (In Polish, with preface and summary in French.)

WEINBERG, G. D. *Tasks of the collective agreement in the fourth and final year of the five-year plan. Report to the sixth plenum of the All-Union Central Council of Trade Unions. Moscow, Cooperative Publishing Society of Foreign Workers in the U.S.S.R., 1932. 64 pp. [In English.]*

Deals with the meaning and purposes of the collective agreements between workers and their employers in Soviet Russia.

WOODY, THOMAS. *New minds: New men? The emergence of the Soviet citizen. New York, Macmillan Co., 1932. 528 pp., illus.*

WORKER'S POINT OF VIEW, THE. *A symposium. London, Hogarth Press, 1933. 160 pp.*

WORLD ASSOCIATION FOR ADULT EDUCATION. *Fourteenth annual report and statement of accounts, 1932–33. London, W.C. 1., 16 Russell Square, 1933. 27 pp.*

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